

# Croplife

TOTAL CIRCULATION  
OVER 8,700 COPIES  
EACH WEEK  
EPA Member, Business  
Publications Audit

WEEKLY NEWSPAPER FOR THE FARM CHEMICAL MANUFACTURER, FORMULATOR AND DEALER  
Published by The Miller Publishing Co., Minneapolis, Minn.

Vol. 3 Accepted as Controlled Circulation Publication at Minneapolis, Minn. NOVEMBER 26, 1956 Subscription Rates: \$5 for 1 year, \$9 for 2 years No. 48

## Nitrogen Improves Range Conditions in Northern Plains

Better Forage Output,  
Increased Returns  
Noted in USDA Tests

WASHINGTON, D.C. — Applications of nitrogen can lead to rapid range improvement, help provide longer grazing periods, and aid in better distribution of livestock over grazing areas, the U.S. Department of Agriculture reported Nov. 21.

More efficient forage production and increased returns per acre were achieved when agronomists of USDA's Agricultural Research Service applied nitrogen as ammonium nitrate to range grasses in tests at the U.S. Northern Great Plains Field Station, Mandan, N.D.

The studies indicate that even though current prices of hay might not make nitrogen applications profitable, added weight gains in livestock grazed could more than pay the fertilizer costs.

During these 6-year field trials, dry matter yields averaged 2,271 lb. an acre from range fertilized with 90 lb. nitrogen annually, and 1,326 lb. an acre when 30 lb. nitrogen were applied annually. Without nitrogen, yields averaged only 748 lb. of dry matter an acre.

This marked yield response was obtained by applying nitrogen to soils already high in total nitrogen before test, the report says. The added nitrogen increased the number of plants and stimulated growth of western wheatgrass, a high-yielding cool-season species.

Vegetative cover of western wheatgrass increased by 46% as a result of the 6-year application of nitrogen at 90 lb. an acre. This

(Continued on page 8)

## Miller Chemical Acquires Lancaster Bone Fertilizer

BALTIMORE, MD.—Miller Chemical & Fertilizer Corp., Baltimore, manufacturer of agricultural fertilizers and pesticides, has acquired the Lancaster Bone Fertilizer Co. plant at Ephrata, Pa. This acquisition gives Miller an additional manufacturing and distributing point for dry and liquid fertilizers, insecticides, fungicides and weed killers in Eastern Pennsylvania, the firm states.

Miller plans to enlarge and modernize the present facilities at Ephrata to serve its growing business in this area. Miller will have a sales office at the Ephrata plant.

Miller Chemical has been doing

(Continued on page 8)

## Substantial Increases in Rail Rates Appear to Be Inevitable Under ICC Law

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON—The fertilizer industry in general, and the potash segment of the industry in particular, finds itself in a difficult position right now as substantial increases in freight rates are being requested by the rail carriers. Caught in the force of a rigid law enacted many years ago and brought to bear by the Interstate Commerce Commission, the fertilizer industry finds itself in

an almost defenseless and most inequitable position where it can only protest strongly against granting of first a 7% and then a 15% increase in freight rates, as asked by the carriers.

Although this action affects the entire fertilizer industry, since most of its raw materials are shipped long distances by rail, the greatest pressure is being exerted against the potash industry. With its mines located principally in New Mexico, the potash suppliers must ship this commodity to the Great Plains states, the Corn Belt and points East. This is done for the most part in train load lots for which it is required to pay rates based on carlot tariffs. Industry spokesmen told Croplife last week that virtually all such shipments move in trainloads intact as far east as Chicago before the train is broken up for regional distribution.

They are not entitled to any rate reduction from published tariffs, although it must be an obvious accounting observation that such an unbroken movement presents an operation of much lower cost for the carriers than other freight movements which require many break points and additional switching and yard handling.

Currently pending is not only an emergency freight rate boost of

(Continued on page 21)

## Economic Returns From Use Of Herbicides Emphasized at Washington Weed Conference

PULLMAN, WASH. — Ways and means to reduce the large annual economic loss caused by weeds—Washington's number one farm and home pest—were heard at the first Washington State College weed conference, held here Nov. 15-16.

The conference, sponsored by the college in cooperation with the Washington Department of Agriculture, was attended by homeowners, farmers, city officials, railroad and telephone company representatives, ground sprayers and chemical company personnel.

Henry Wolfe, Washington State College extension weed specialist, was conference chairman.

In addition to discussions on use and place of new methods and chemicals for killing weeds, conferees saw an exhibit of more than 200 weeds common to Washington state.

A. W. Lange, Spokane County

weed supervisor, outgoing president of the Washington Weed Assn., welcomed more than 100 conference members from Washington, Oregon, Idaho and British Columbia.

Dr. Lambert Erickson, associate agronomist at the University of Idaho, Moscow, said that control of weeds in irrigated wheat can increase returns by up to \$61 per acre. He said weed control studies in irrigated areas where Canada thistle infestation is heaviest show that wheat yields can be obtained up to 67 bu. per acre.

Giving averages over a 4-year period, Dr. Erickson said the use of 2,4-D had increased wheat yields from 21 to 26 bu. per acre and per-acre returns by \$6; use of nitrogen fertilizer (alone) had pushed yields up by 40 bu. and per-acre returns

(Continued on page 20)

## AGRONOMY PANEL DISCUSSES

## Closing the Gap Between Recommended Fertilizer Practices and Actual Use

★

### EDITOR'S NOTE

Croplife presents here the texts of some of the papers given at the American Society of Agronomy meeting, Cincinnati, Ohio, Nov. 12-16. These papers comprised a panel discussion on "Closing the Gap Between Recommended Fertilizer Practices and Actual Use," on Nov. 14, under the chairmanship of Dr. A. H. Bowler, Swift & Co., Chicago. Ideas contained in these presentations should be of interest to those responsible for the marketing efforts of the plant and fertilizer industry.

### THE PROBLEM

By George D. Scarseth

American Farm Research Association  
Lafayette, Ind.

Average fertilizer recommendations fit almost nobody. Professor Kohlmeier at Purdue University recently said, "Farming is becoming such a specialized business that general prescriptions are almost useless."

Who are we trying to reach? Here are some facts to consider, according to the late Dr. Larry Norton of Illinois, the 1954 figures show that 50.8% of the total U.S. farm production was made by 9% of the nation's farmers,

and that 61% of the farmers in the lowest farm income brackets produced only 12%. This left a middle group of 30% who produced only 37% of the U.S. farm production.

To me this indicates three management levels.

The bottom producers are not economic farming enterprises, and generally are neither able nor interested in recommendations of any kind.

The top production group includes large farms, generally a fair amount of working capital, and frequently the most able management. These farmers for a large part rely on their own

(Continued on page 6)

## Super Output Shows Decline in September

WASHINGTON — September output of superphosphate and other phosphatic fertilizers amounted to 170,557 short tons, compared with 182,209 short tons in September a year earlier, according to the Bureau of the Census.

The September, 1956 production included 98,278 tons of normal, 57,170 tons of concentrated and 13,929 tons of other phosphatic fertilizers. Tonnage of enriched and wet-base goods was not reported.

Total stocks on hand at the end of September were 393,830 tons, compared with 301,413 tons at the end of September, 1955.

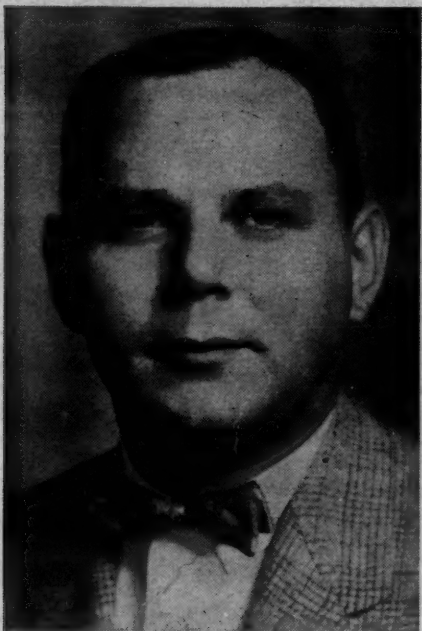
### Inside You'll Find

Patents and Trademarks .....	4
Over the Counter .....	9
Field Notes .....	9
What's New .....	10
Oscar and Pat .....	12
Farm Service Data .....	13
Bug of the Week .....	16
World Report .....	21
Editorials .....	22
Meeting Memos .....	23
Index of Advertisers .....	23





**HEAD PACIFIC NORTHWEST GROUP**—Ben McCollum, J. R. Simplot Co., Pocatello, Idaho, left above, was elected president of the Pacific Northwest Plant Food Assn. at the group's seventh annual meeting Nov. 7-9 at Harrison Hot Springs, B.C. Mr. McCollum moves up from the post of vice president, to succeed Frank Meeker, Meeker Fertilizer Co., Salem, Ore. Other officers elected were Frank Taylor, Oregon-Washington Fertilizer Co., Seattle, center above, vice president; Henning Waltersdorph, Magnolia Fertilizer Co., Seattle, right, treasurer, and Leon S. Jackson, Portland, Ore., secretary. Mr. Waltersdorph succeeds Robert Allard, Wilbur-Ellis Co., Seattle, and Mr. Jackson was reelected. Norman Hibbert, the Anaconda Co., Yakima, Wash., was elected as a member of the board of directors, to succeed retiring director S. W. Martin, Yakima Valley Spray Co., Yakima, Wash. The new board has scheduled a meeting for Dec. 10 in Seattle.



Gerald P. Tinney

### Gerald P. Tinney Joins Roberts Chemicals

Gerald P. Tinney has been appointed to handle the sales of agricultural chemicals manufactured by Roberts Chemicals, Inc., Nitro, W. Va. The products include Dithio-carbamate fungicides, Herbisane and Purified DDT.

Mr. Tinney's sales responsibility will be throughout eastern United States. A graduate of West Virginia University, he received a bachelor of science degree in agriculture. He has been employed in sales of agricultural chemicals for the past four years.

#### ENTOMOLOGY SEMINAR

**STATE COLLEGE, MISS.**—An entomology seminar will be held Nov. 27 at 7 p.m. at the Alumni Student Bldg. at Mississippi State College here. Principal speaker will be Dr. H. H. Golz, associate medical director for American Cyanamid Co.

#### VETERAN AGENT TO RETIRE

**BATON ROUGE, LA.**—A. B. Curet, Pointe Coupee Parish, oldest county agent in Louisiana from point of service, will retire Dec. 17. Mr. Curet, who has been in the office 40 years, organized Louisiana's first large-scale cotton weevil control project with poison ordered in car-load lots.

### George C. Ellis Named Senior Vice President of Stauffer

**NEW YORK**—Stauffer Chemical Co. announces that George C. Ellis has been appointed a senior vice president of the company and general manager of the West End Chemical Co. division. He has also been elected to Stauffer's board of directors.

Mr. Ellis is one of the original organizers of West End Chemical Co. and has been an officer and director of that company for the past 26 years. He has served as West End's president since 1943.

At the same time, Stauffer announced that H. D. Hellmers, formerly vice president in charge of production for West End Chemical, has been named division vice president, production of Stauffer Chemical Co.

D. G. Ellis, since 1953 West End's sales manager, has been appointed division vice president, sales, of Stauffer. West End Chemical Co. was merged into Stauffer Chemical Co. Oct. 1.

### Vegetable Growers to Hear Talks on Farm Chemicals

**GRAND RAPIDS, MICH.**—Developments in agricultural chemicals will be one of the top subjects for the annual meeting of the Vegetable Growers Association of America, at Grand Rapids, Nov. 27-30. The truck growers especially will give time to the chemical industry on Nov. 28.

Vegetable production and marketing specialists from all over the country will address the annual meeting. And many specialists from Michigan State University are scheduled on the four-day program at the Civic Auditorium.

Separate sessions on marketing and processing crops are slated Nov. 27 along with the annual business meeting. Individual meetings are scheduled Nov. 28 for potato, greenhouse, muck crop and truck growers. And on Nov. 29 reports will be given on land resource development and policy, new products for growers' use and recent research.

#### HORTICULTURISTS TO MEET

**NEW BRUNSWICK, N.J.**—The 82nd annual meeting of the New Jersey Horticultural Society will be held Dec. 3-5 in the Claridge and Marlborough-Blenheim Hotels, Atlantic City.

### Forest Fertilization In West Germany Reviewed in Report

**NEW YORK**—The practice of fertilizing forests to increase wood production is considerably more advanced in West Germany than in the U.S., it was stated here Nov. 20 by Dr. E. D. Crittenden, director of research, Nitrogen Division, Allied Chemical & Dye Corp.

Dr. Crittenden based his observations on the contents of a newly translated, 112 page report on German forest fertilization results.

He pointed out that German foresters had, by using fertilizer, increased nursery yields from 100 to 400% and yields of forest trees by 150 to 250%. The report indicates that they have also applied their research findings in practical forestry on a more intensive scale than is known in the U.S.

Dr. Crittenden said, "This intensive German work has been sparked by a much tighter wood supply situation over there than we have experienced. In a period of less than 10 years, German wood imports have increased 13 fold. Though wood is more plentiful in the U.S., projected population increases and a continuation of the upward trend in pulp and paper consumption make it imperative for us to increase the yields of our forests."

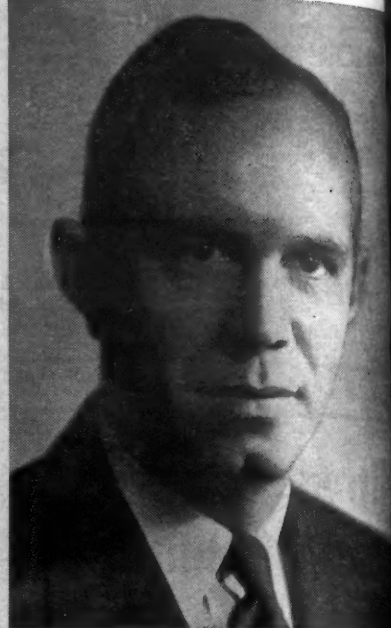
The comprehensive report was published abroad by the German firm of Ruhr-Stickstoff, Bochum, and translated and published here by Allied Chemical. The purpose of the report is stated in a foreword by Prof. Dr. W. Wittich, of Göttingen University, one of Germany's leading soil scientists. He writes that the book should prove a valuable aid to the practical forester, based as it is on latest knowledge, and should enable forestry to begin catching up with the great head start agriculture has in the field of fertilization. In the U.S., 50 million additional acres would be required to maintain present agricultural production without the use of fertilizer.

Dr. Crittenden noted that the report will be immediately useful to practical foresters, research workers, nurserymen, woodland managers, and others concerned with production, conservation, and modern forest management.

"The species of trees and chemicals mentioned," Dr. Crittenden pointed out, "are the same as those found in this country. In addition, there are several new ideas presented. One is an ingenious method of 'rolling' fertilizer into the forest soil. Both the technique and the machine described are new in our experience. Another chapter details how the German foresters establish game browsing areas in the forest by planting food grasses so that deer and other game will feed on the grasses rather than on the young trees. This practice might help solve the same problem in this country."

The role of the German government in encouraging increased forest output by fertilization is covered, as well as the work of the various forest agencies. The government is shown to have a dual interest in forest rehabilitation. It desires more wood production and, almost as important, better water retention for the greatly increased demands by industry and population on available water supplies. Technical methods of achieving better water retention are fully explained.

The first distribution of the report is being made to members of the Soil Science Society of America. Individual copies of the report, entitled, "The Use of Commercial Fertilizers, Particularly Nitrogen, in Forestry," may be obtained free of charge by writing to Dr. E. D. Crittenden, Nitrogen Division, Allied Chemical & Dye Corp., 40 Rector St., New York 6, N.Y.



Alfred J. Dickinson

### Alfred J. Dickinson Named Assistant to President of V-C

**RICHMOND, VA.**—Alfred J. Dickinson, vice president in charge of purchasing since 1952, has been named assistant to the president of Virginia-Carolina Chemical Corp. The announcement was made by William H. Wilson, new president of the fertilizer and chemicals concern. He said that Mr. Dickinson will continue as a vice president.

At the same time Mr. Wilson announced the appointment of Douglas W. Laird as manager of the purchasing department which handles all buying for the corporation.

Robert R. Martin, a native of Richmond and a graduate of the University of Richmond who joined V-C in 1951, was named as an assistant manager of the purchasing department.

Mr. Dickinson, a native of Eufaula, Ala., is a graduate of the University of Richmond and the Harvard School of Business Administration. He joined V-C in 1939 as assistant to the controller and after World War II returned to the company and became acting manager of the purchasing department in 1947. He was named manager in 1948.

Mr. Laird was graduated from the University of Richmond in 1942. He joined V-C in 1948 after wartime service as a captain in the air force, then left again for duty during the Korean conflict. He returned in 1953 and was appointed assistant manager of the purchasing department in 1954.

### Rutgers Pesticide Conference Slated

**NEW BRUNSWICK, N.J.**—Newest recommendations for pest control in 1957 will be presented and explained, Nov. 29, at the annual Rutgers Pesticide Dealers Conference in University Commons.

Dr. Leland G. Merrill, Jr., extension specialist in entomology at the College of Agriculture, chairman of a committee arranging the conference, says topics will include insect plant disease and weed control for the home grounds, greenhouses and nurseries.

Those who attend will receive a series of recommendations prepared by specialists in each field as the result of research and experience. Results with new systemic insecticides will be described.

The all-day program will start at 9:45 in Room F of the Commons which is in George St., New Brunswick.

#### HEADS COUNTY AGENTS

**MANHATTAN, KANSAS**—Paul Wilson, Great Bend, recently was elected president of the Kansas County Agricultural Agents' Assn.

### Wildlife Use of Pesticides

**NEW HAVEN, C.**—Pesticides are essential to produce the quantity of food and fiber on which the life of the country depends. Turner of the cultural experiment station, a paper prepared for the annual convention of the Audubon Society in New Haven, Mr. Turner finds interest between use of pesticides in cultivated agriculture and persons particularly interested in protection of wildlife. The air of swamps, quitos and of wood insects attacking forest, has led to controversy.

For 34 years, Mr. Turner, the Connecticut experiment station, has been spraying thousands of acres of swamps with pesticides to restrict the spread of the moth. No particular wildlife was recorded, no records of any other wildlife.

When large-scale spraying of the air became practical, then state departments conducted intensive experiments in swamps in the state fish and game department. They found that no wildlife followed us to the acre.

Connecticut law prohibits application of pesticides by the state department authorized to issue permits from aircraft with the state fish and game department. Areas of the Connecticut experiment station, and of the commissioner as the weeks advance no published, is required to be sprayed.

Each agency has any application for a permit. Mr. Turner has rejected many applications when the pesticides are not abundant enough and forbidden use from the air.

No regulation of pesticides, Mr. Turner says, but few of these have been seriously damaged.

"We are well aware of recreation, relaxation of nature which is being banished," Mr. Turner says. "We have no vested interest in controlling it as a control in Connecticut depends on ditching."

### Recommended Would Boost Wisconsin Exports

**MADISON, WIS.**—Specialists report that alfalfa hay could be boosted by 27 bu. and potato farmers would find recommendations for improved management.

These research results could average 340 lb. of actual phosphate and potash yields average 4 use on corn average actual plant food.

As far as average yields of 3.5 tons per acre, 2.2 tons by acre amounts of additional soils specialists.



## Wildlife Undisturbed by 34-Year Use of Pesticides in Connecticut Forests

NEW HAVEN, CONN. — "Pesticides are essential at the present time to produce the quantity and quality of food and fiber our people want," says Mr. Turner of the Connecticut agricultural experiment station reported in a paper prepared for delivery at the annual convention of the National Audubon Society in New York City. Mr. Turner finds little conflict of interest between users of pesticides on cultivated agricultural crops and persons particularly concerned with protection of wildlife. Treatment from the air of swamps to control mosquitoes and of woodlands to control insects attacking forest trees, however, has led to legislation, and at times to controversy.

For 34 years, Mr. Turner points out, the Connecticut agricultural experiment station sprayed "thousands of acres of woodlands with tons of pesticides in an attempt to restrict the spread of the gypsy moth. No particular disturbance of wildlife was recorded and there are no records of any controversy about wildlife."

When large-scale treatment from the air became practical, Dr. R. B. Friend, then state entomologist, conducted intensive experiments on uplands and swamps in cooperation with the state fish and game commission. They found that no marked change in wildlife followed use of 1 lb. of DDT to the acre.

Connecticut law now regulates application of pesticides in this way: the state department of health is authorized to issue permits for spraying from aircraft with the approval of the state fish and game commissioner as to areas, of the Connecticut agricultural experiment station as to materials, and of the state aeronautics commissioner as to low flying. Two weeks advance notice, legally published, is required before salt marshes can be sprayed.

Each agency has a veto power on any application for spraying by aircraft, Mr. Turner said. The station has rejected many proposed applications when the pest in question was not abundant enough to be injurious and forbidden use of many materials from the air.

No regulation can prevent occasional accidents in air placement of pesticides, Mr. Turner points out, but few of these incidents have been seriously destructive to wildlife.

"We are well aware of the need for recreation, relaxation, and enjoyment of nature which increases with urbanization," Mr. Turner concluded. "We have no vested interest in spraying as a control measure. Mosquito control in Connecticut usually depends on ditching and draining to

prevent mosquito breeding. The campaign of the state fish and game commission to increase wildlife in woodlands fits perfectly the requirements for prevention of the gypsy moth. We are continuing our researches for means of control of pests other than use of insecticides."

The economic entomologists at the Connecticut agricultural experiment station are on record as to the place of insecticides in pest control. They call it the last step, to be taken only when serious economic losses cannot be avoided by studying "the life history of the pest, with the hope of finding some way to avoid its damage" and "the parasites, predators, and diseases of the insect." If these offer no relief, the use of insecticides is investigated. The decision as to use of insecticides is usually the responsibility of the owner of the property.

## Co-op Hears of New Liquid Developments

PORTLAND, ORE. — The recent 23rd annual three-day convention of Pacific Supply Cooperative heard of new liquid fertilizer developments being made available to Pacific Northwest producers.

Karl Baur, Pacific's chemicals division manager, said farmers are showing interest in "multiple use" solutions which combine several plant food elements as well as insecticides in a single application.

Besides using straight aqua ammonia on field and row crops, farmers are asking for specially mixed solutions containing phosphate, sulfur and molybdenum, Mr. Baur reported. Practicality of adding other minor nutrients is under study.

"The whole idea of multiple use solutions and equipment has a tremendous appeal to farmers," he said. "If they can get two or three jobs done in one trip over the field, that runs up into savings of time and

CROPLIFE, November 26, 1956—3

money pretty fast."

Mixing of 2,4-D with nitrogen spray solutions is proving very popular in some Oregon farming areas, Mr. Baur said.

Six Willamette Valley co-ops began liquid fertilizer service in the past season and five more are now assembling storage and application equipment, he said. Some 36 additional co-ops throughout the region joined with Pacific in offering this service this year.

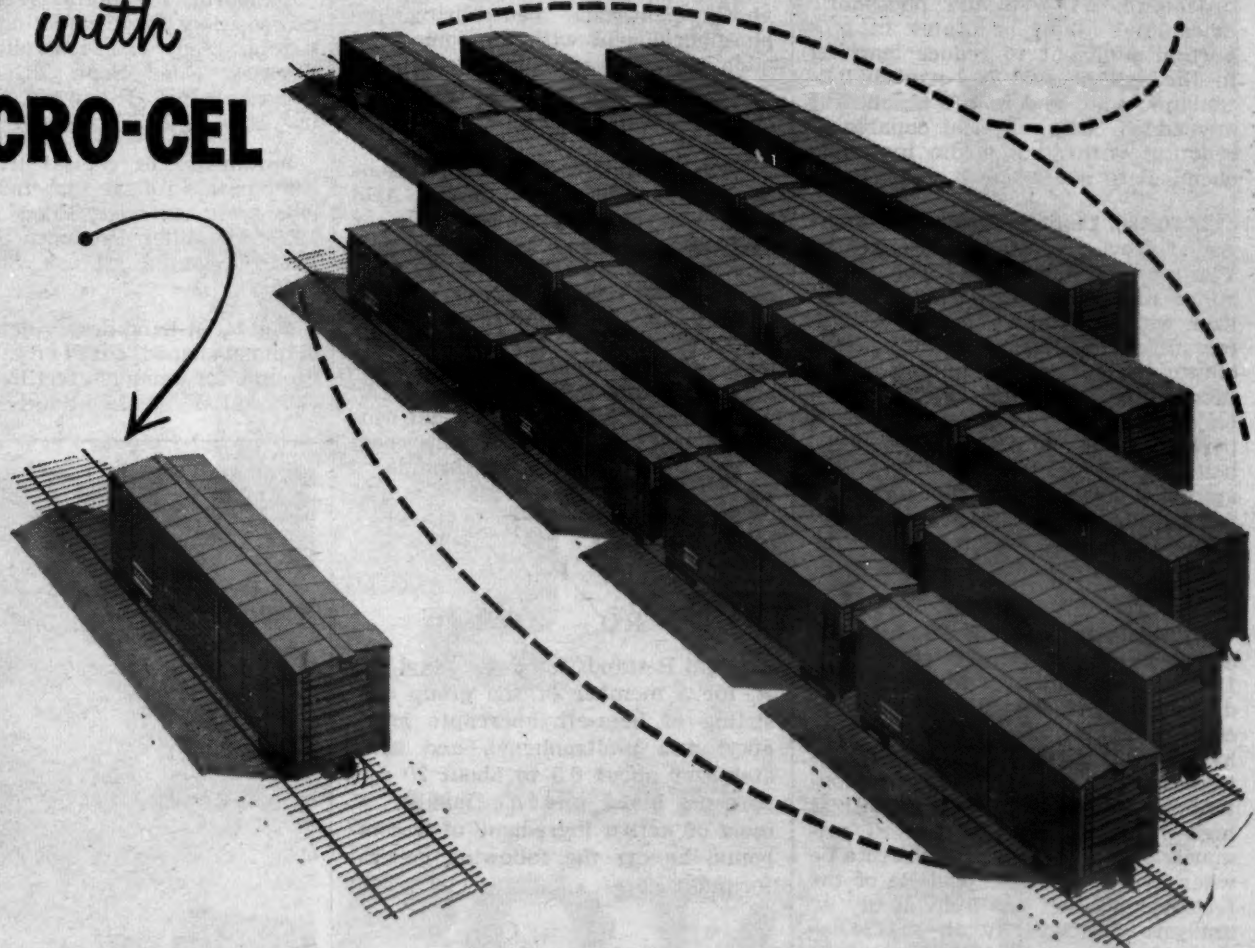
## SEED FIRM SOLD

SAN FRANCISCO — Walter Reubold, who for 35 years has operated the Sunset Seed & Nursery Co. in San Francisco, sold out recently to Marvin Buck, his assistant for the past 12 years. Mr. Buck is a graduate in agriculture of the University of California at Davis. Sunset Seed & Nursery carries the Ortho line of agricultural chemicals in addition to its own Sunset Garden and Lawn fertilizers.

*This shipment of 50% Heptachlor concentrate formulated with*

**MICRO-CEL**

*—can provide application quantities like this*



The advantages of formulating insecticide dusts at the higher concentrations obtainable with Micro-Cel\* is graphically demonstrated by the freight cars above. One car of 50% Heptachlor when let down to a 2½% poison at the point of application produces the equivalent of 20 cars of insecticide in the field. Since Micro-Cel costs no more than many other diluents, the substantial freight savings mean extra profits for you.

## PROVEN WITH MANY POISONS

Micro-Cel, a new line of synthetic calcium silicates developed by Johns-Manville, has been tested and proven at such high dust and wettable powder concentrates as:

75% DDT	70% Toxaphene
75% Aldrin	75% Dieldrin
50% Aramite	50% Chlordane

Experiments with other poisons are under way today.

## IMPROVES FLOWABILITY

Micro-Cel — "the powder that flows like a liquid" — reduces caking, increases flowability and gives more uniform coverage with dry dusts. Other important properties include large surface area, small particle size and high bulking action.

Ask your Celite engineer to help you adapt Micro-Cel to your particular requirements, or mail coupon below.



## Recommended Practices Would Boost Yields, Wisconsin Experts Say

MADISON, WIS. — Wisconsin soils specialists report that corn yields could be boosted 56 bu. per acre, alfalfa hay by about 1.3 tons, oats by 27 bu. and potatoes by 200 bu., if farmers would follow college recommendations for fertilizer and use improved management practices.

These research men estimate corn yields could average 100 bu. per acre if fertilizer were added at the rate of 340 lb. of actual nitrogen, phosphate and potash per acre. Present yields average 44 bu. and fertilizer use on corn averages only 27 lb. of actual plant food per acre.

As far as alfalfa is concerned, average yields could be boosted to 3.5 tons per acre from the present 2.2 tons by adding recommended amounts of adapted fertilizer, the soils specialists say.

\*Micro-Cel® is Johns-Manville's new absorbent-grinding aid designed specifically for the insecticide formulator.

**Johns-Manville**  
**MICRO-CEL**

SYNTHETIC CALCIUM SILICATES  
A PRODUCT OF THE CELITE DIVISION

Johns-Manville, Box 14, New York 16, N.Y.  
In Canada: Port Credit, Ontario  
Please send ☐ further information; ☐ samples of Micro-Cel. I am interested in using Micro-Cel with the following poisons:

☐ Please have your local representative contact me.

Name \_\_\_\_\_ Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



## Industry Patents and Trademarks

**2,770,520. Recovery of Uranium from Phosphoric Acid and Phosphate Solutions by Ion Exchange.** Patent issued Nov. 13, 1956, to Ray S. Long, Solano, and Richard H. Bailes, Walnut Creek, Calif., assignors to the United States of America as represented by the Atomic Energy Commission. In a method for recovering uranium values from a phosphoric acid solution, the steps comprising oxidizing said uranium in solution to the VI oxidation state, whereby uranyl phosphate complex anions are formed therein, contacting the oxidized solutions with an anionic exchange resin to adsorb said uranyl complex anions thereon, and then eluting adsorbed uranium from said exchange resin with an acidic solution and an adjunct reducing agent.

**2,770,537. N-1-Naphthylphthalamic Acid Herbicidal Compositions.** Patent issued Nov. 13, 1956, to Allen E. Smith, Oxford, Albert W. Feldman, North Haven, and Gracie M. Stone, Naugatuck, Conn., assignors to U.S. Rubber Co., New York. The method of controlling weeds in soil which comprises treating the soil before emergence of weeds with a phytotoxic amount of N-1-naphthylphthalamic acid, and material selected from the group consisting of sulfuric, hydrochloric, nitric and phosphoric acids, and alkali bisulfates in proportion sufficient to reduce leaching in the soil of said N-1-naphthylphthalamic acid, and in the absence of any added basic material capable of reacting with such acidic inorganic chemical to neutralize it.

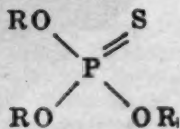
**2,770,538. Liquid Fertilizers.** Patent issued Nov. 13, 1956, to Donald E. Vierling, Pittsburgh, Pa. The method of manufacturing a liquid fertilizer which comprises adding to water sufficient potassium hydroxide to obtain the desired percentage of potassium oxide, adding sufficient phosphoric acid to obtain the desired percentage of phosphorous pentoxide, neutralizing the phosphoric acid with ammonia and adding sufficient urea to provide the desired amount of organic nitrogen, said organic nitrogen avoiding fast assimilation of nitrogen.

**2,770,539. Process for Producing a Mixed Fertilizer.** Patent issued Nov. 13, 1956, to Simon J. Martenet, Indianapolis, Ind. The continuous process of making a substantially non-hydrosopic mixed fertilizer of particulate form with a final water content as low as one percent with a high nitrogen content derived primarily from ammonium nitrate wherein each discrete particle of the fertilizer product has individually an analysis substantially the same as that of the overall fertilizer, which process comprises intermixing and agitating quickly into a thin watery slurry, a dry, finely divided phos-

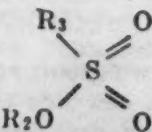
phate material selected from superphosphate and triple superphosphate, and a water solution of ammonium nitrate in a concentration selected for the final fertilizer nitrogen content wherein the total quantity of the ammonium nitrate ranges from 300 to 800 pounds per ton of finished fertilizer and the temperature of the slurry is maintained above the ammonium nitrate salting out temperature ranging upwardly from an approximate minimum of 130 degrees F., the quantity of water in said solution ranging upwardly from approximately 150 pounds per ton of finished fertilizer; agitating the slurry and simultaneously cooling it to below said salting out temperature resulting in quick solidification; and continuing the agitation to bring the solidifying product into particulate form.

**2,770,540. Liquid Fertilizers.** Patent issued Nov. 17, 1956, to Donald E. Vierling, Pittsburgh, Pa. The method of manufacturing a liquid fertilizer which includes adding to water sufficient potassium hydroxide to obtain the desired percentage of potassium oxide, neutralizing the potassium hydroxide with nitric acid, adding sufficient phosphoric acid to obtain the desired percentage of phosphoric pentoxide, neutralizing the phosphoric acid with ammonia, and adding equal molecular weights of ammonia and nitric acid to obtain the desired percentage of nitrogen.

**2,770,567. Insecticidal Compositions of Esters of Thionophosphoric Acid Stabilized by Organic Sulfates or Sulfonates.** Patent issued Nov. 13, 1956, to Karlfried Wedemeyer, Leverkusen-Schleibusch, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany. Stabilized non-aqueous insecticidal compositions containing as an active ingredient an insecticidal neutral ester of thionophosphoric acid of the following general formula:



wherein R stands for lower alkyl and R<sub>1</sub> for a member of the group consisting of beta-ethylmercapto lower alkyl and p-nitrophenyl, and as a stabilizer about 0.5 to about 20 mol percent, based on the number of mols of active ingredient of a compound having the following general formula:



wherein R<sub>2</sub> stands for lower alkyl and R<sub>3</sub> is a member selected from the group consisting of lower alkyl, O-lower alkyl and tolyl.

**2,770,658. Process for the Manufacture of Benzene Hexachloride.** Patent issued Nov. 13, 1956, to Ford R. Lowdermilk, Gwynedd Valley, and Everett A. Bruce, Paoli, Pa., assignors to the Pennsylvania Salt Manufacturing Co., Philadelphia, Pa. In a process for the recovery of a water immiscible organic liquor adhering to benzene hexachloride solids, the steps comprising washing the benzene hexachloride solids containing adhering water immiscible organic liquor with an aqueous solution of an organic wetting agent at a temperature at which both the water immiscible organic liquor and the wash water remain liquid, thereafter withdrawing a mixture of water immiscible organic liquor and the said

aqueous solution of the organic wetting agent from contact with said solids and separating the said organic liquor from the said aqueous solution.

### Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

Trademarks appearing below were published in the Official Patent Office Gazette dated Nov. 13, 1956:

**SK Surekill Brand**, hand-lettered design within circle, for insecticide sprays in liquid form and in dry granular form. Filed Mar. 14, 1955, by Mutual Products Co., Minneapolis, Minn. First use Mar. 2, 1955.

**Super Kill**, in hand-lettered capitals, for agricultural pesticides. Filed Sept. 12, 1955, by Taylor Chemical Co., Aberdeen, N.C. First use, January, 1955.

**Fumi-Sol**, in capital letters, for soil fumigant capsule. Filed Sept. 19, 1955, by Chemical Research, Inc., Detroit, Mich. First use May 9, 1947.

**Panoram**, in capital letters for seed disinfectant and protectant. Filed Sept. 20, 1955, by Panogen, Inc., Ringwood, Ill. First use, Dec. 29, 1954.

**Panodrin**, in capital letters, for compositions for disinfecting and protecting seeds and controlling plant diseases. Filed Sept. 20, 1955, by Panogen, Inc., Ringwood, Ill. First use Mar. 9, 1955.

**Spradusto**, in capital letters, for combination foliage insecticide-fungicide wettable dust. Filed April 12, 1956, by Miller Products Co., Portland, Oregon. First use, September, 1945.

**Big N**, in hand-drawn design, with diamond-shaped outline in background, for ammonia fertilizers. Filed Oct. 4, 1955, by Mid-South Chemical

Corp., Memphis, Tenn. First use on or about July 16, 1955.

**Ever-Drill**, in capital letters, for fertilizer. Filed June 25, 1956, by Federal Chemical Co., Louisville, Ky. First use, June 13, 1956.

**Maxicrop**, in capital letters, for fertilizers. Filed June 25, 1956, by Maxicrop, Ltd., Holdenby, Northampton, England. Owner of British Reg. No. 731,101, dated June 10, 1954.

**Dapur**, in capital letters, for fertilizing compound. Filed June 27, 1956, by the Colorado Fuel and Iron Corp., Denver, Colo. First use April 15, 1955.

**Dapal**, in capital letters, for fertilizing compound. Filed June 27, 1956, by the Colorado Fuel and Iron Corp., Denver. First use May 15, 1956.

### Fertilizer Talk Set for Production Conference

**BIRMINGHAM, ALA.**—The latest information on the what, how, and when of fertilizing cotton for the most economical production will be presented at the second annual Cotton Production Conference here Dec. 13-14.

Dr. Robert W. Pearson, soil scientist with the U.S. Department of Agriculture at Auburn, Ala., will develop the topic in a talk on "new concepts in cotton fertilization" Dec. 13.

### Joins Miller Publishing

**MINNEAPOLIS**—Rodney Smith has joined the editorial staff of the Miller Publishing Co., Minneapolis, announces Harvey E. Yantis, president. Mr. Smith will handle assignments of The Northwestern Miller, The American Baker and Milling Production, three of the company's five trade publications. The company also publishes Feedstuffs and Croplife. Mr. Smith attended the University of North Dakota, Grand Forks, where he received a B.A. degree in journalism. He spent five and one-half years with the Grand Forks (N.D.) Herald as regional reporter.



Robert H. Farrow

### Southern Nitrogen Appoints Two for New Positions

**SAVANNAH, GA.**—Southern Nitrogen Co. has announced two appointments: Robert H. Farrow, as director of research; and Robert Heck as director of technical service.

Mr. Farrow has been closely associated with the chemical and fertilizer industry since 1950 in connection with his work in agricultural and chemical market research, product development and chemical sales. He has done extensive survey work in the south and southeast, including market analysis and product development work in the pesticide and herbicide fields.

The new director of research holds



Robert Heck

an agricultural economics degree from the University of Wisconsin and a master of science degree from the University of Illinois. He was formerly associated with Spencer Chemical Co.

Mr. Heck, in his new position, will have full responsibility for assisting fertilizer manufacturers in the best and most economical use of nitrogen ammoniating solutions, as well as for liaison work between sales and production departments and between the general office and territory salesmen.

A native of North Carolina, Mr. Heck received a degree in chemistry from the University of that state, and later took graduate work in chemical engineering at North Carolina State.

Before joining Southern Nitrogen Co., Mr. Heck was associated with Allied Chemical & Dye Corp.

**CLOSE OUT AT MFG.'S COST**  
Aluminum Tanks for Liquid Fertilizer  
22,000 gal. code and noncode. Also 1,000,  
830 and 500 gal. capacity with and without  
skids. F.o.b. Birmingham, Ala., and  
Minneapolis, Minn. Phone or write.  
Special Products Division  
**BUTLER MFG. CO.**  
7400 East 13th St. Benton 1-7400  
Kansas City, Mo.

Never Underestimate the  
**SALES POWER**  
of **YOUR NAME** in  
**YOUR MARKET**  
Your label means controlled  
sales! Write  
today...  
**PRIVATE BRANDS**  
300 So. 11th • Dept. CL • Kansas City, Kansas



## Program Set for Oklahoma Fertilizer Dealers Conference

STILLWATER, OKLA.—The second annual fertilizer dealers conference will be held at Oklahoma A&M College as a preliminary to crops, soils and fertilizer conference that opens Nov. 29.

Sponsored by the Oklahoma Plant Food Educational Society, the dealers' conference Nov. 28 will be centered around ways and means to merchandise fertilizer. Leading authorities in the nation will discuss the practical application and agronomic use of fertilizer.

Perry Onstot, agronomist for the Davison Chemical Co., Joplin, Mo., and program chairman, said the meeting was organized to promote a better understanding in regards to using fertilizer in Oklahoma.

Speakers include Joseph E. Burer, vice president and sales manager of the Corneli Seed Co., St. Louis, Mo.; Dr. Frank Boyd, agronomist for the Virginia-Carolina Chemical Corp., Atlanta, Ga., and Dr. L. B. Nelson, head of the eastern soil and water management section of the U.S. Department of Agriculture Agricultural Research Service at Beltsville, Md.

Others listed are Dr. George Benson, Harding College president, Searcy, Ark.; William J. Saltee, Greer County agent, Mangum, and Parks Feats, director of the feed, seed and fertilizer division of the Oklahoma Board of Agriculture.

Oklahoma A&M staffers include Dr. M. D. Thorne, head of the college agronomy department, speaking on "The Future of Fertilizer in Oklahoma," and Harry Canup, director of the A&M business extension service, who will speak on salesmanship.

Dr. Hugo Graumann, technical leader for alfalfa breeding and research work in the forage and range section of the USDA, Beltsville, Md., will be among top scientists presenting reports during the crops and soils conference Nov. 29.

Dr. Graumann, a research agronomist, will talk on "Research Results for Improved Alfalfa Production." "Recent Developments and Results in Cotton Research" will be reported by Dr. John Green, A&M cotton specialist, and Dr. Nelson will speak on "Advances in Soil Fertility Research."

A progress report on the spotted alfalfa aphid will be given by Dr. D. C. Bryant, A&M entomologist, and new turf grass varieties for Oklahoma will be discussed by Dr. Wayne Luffine, A&M agronomy professor.

Dr. M. D. Thorne, head of the A&M agronomy department, will speak to the group on revisions in Oklahoma's agronomic research program. Recent developments in farm machinery will be reported by Jay Porterfield, A&M agricultural engineering professor.

## Monsanto Chemical to Expand Phenol Production Capacity

ST. LOUIS — Monsanto Chemical Co. recently disclosed plans for a major expansion of its production capacity for phenol, the chemical source of hundreds of end products ranging from dyestuffs, plastics and pharmaceuticals to detergents, weed killers and insecticides.

Charles H. Sommer of St. Louis, Monsanto vice president and general manager of its Organic Chemicals Division, announced that the company will invest several million dollars in additional production facilities for phenol at its Monsanto, Ill., plant.

The expansion, scheduled for completion in the second half of 1958, will boost Monsanto's phenol capacity approximately 25%, Mr. Sommer said.

## Wheat Best Crop For Response to Fertilizer in Kansas

MANHATTAN, KANSAS—Wheat has responded more consistently and more profitably to applications of fertilizer under Kansas conditions than has any other crop, according to F. W. Smith of the Kansas State College department of agronomy.

"This has been true throughout the state, including the area of north-eastern Kansas where wheat is less important," he said.

Use of only 25 lb. per acre of nitrogen plus necessary phosphate and potash could add an average of 9.5 bu. an acre to the yield of wheat. This has been true for a wide variety of conditions, including years of above average rainfall as well as years of below average rainfall.

In some instances, an increase of up to 50 lb. of nitrogen an acre will add another four bushels to the yield of wheat. However, use of only 25 lb.

of nitrogen to the acre is widely practiced in the southern portion of the Great Plains where nitrogen deficiencies are not so marked, Mr. Smith said.

"Nitrogen is one of the most profitable fertilizers to use," Mr. Smith commented.

Average increase from nitrogen applications has been 12 bu. of wheat to the acre, whether the fertilizer was applied at seeding time or as late as March 30.

## Aceto Adds Fungicides To Product Line

FLUSHING, N.Y.—Aceto Chemical Co., Inc., 40-40 Lawrence St., Flushing, N.Y., announces the addition of agricultural fungicides to its product line. Included among the new products are: Thiram, Zineb, Ziram, and MCPA. All products consist of 100% active powder, the firm says. Technical data sheets and price bulletins are available on request.

## Pennsalt Acquires Delco Chemicals

PHILADELPHIA — The boards of directors of Pennsalt Chemicals and Delco Chemicals, Inc., Los Angeles, have approved a plan under which Pennsalt will acquire Delco, William P. Drake, Pennsalt president, has announced. The acquisition will be accomplished through an exchange of stock.

With a new main plant and office located in Los Angeles and another recently constructed plant at Dallas, Texas, Delco's major activities are the manufacture and sale of organic and inorganic specialty cleaning and paint stripping compounds for the aircraft industry and for general maintenance purposes.

## AIR POLLUTION ASSN. MEETS

HOUSTON, TEXAS—The Air Pollution Control Assn. will hold its semi-annual technical meeting at the Rice Hotel here Dec. 3-5.



YOUR QUALITY AND PROFITS ARE ASSURED

with

# POTASH



Every bag of TRONA® POTASH in your mixed fertilizers is bumper crop insurance. Poor yields, poor crops and poor profits result from *insufficient available* Potash in your soils. To protect the all-important crop producing power of your soil, make sure you supply enough TRONA POTASH in your fertilizer program. See your fertilizer dealer today. He can help you with your crop's Potash requirements.

## American Potash & Chemical Corporation

Sales Offices

3030 W. Sixth St., Los Angeles 54, Calif.  
99 Park Avenue, New York 16, New York  
235 Montgomery St., San Francisco 4, Calif.  
1320 S.W. Broadway, Portland 1, Oregon  
214 Walton Building, Atlanta 3, Georgia

Export Division

99 Park Avenue, New York 16, New York

## TRONA

Photos courtesy  
Western Growers Assoc.



## AGRONOMY PANEL

(Continued from page 1)

knowledge and seek specific guidance and specific recommendations. These also include the farmers who want to know the "why" of fertilizers. They want to know the agronomic limits and facts about soils and plant food nutrients and will figure out their own uses and economic risks and advantages. These farmers aren't much interested in fertilizer recommendations because they are beyond this in their own practices. This leaves the 30% middle group to consider our recommendations. What is their requirement?

This middle group is the core of our rural America. They are in economic trouble even in prosperous times for numerous reasons. The biggest of these date to the home-standing act that set the farm size at 160 acres. This is too small for the high overhead of modern times to be efficient. Therefore, these farmers are short of working capital and long time credit such as goes with spending money for fertilizers which pay up to 300% return over a period of years.

This return does not always come in time for the bank loan due on the fertilizer purchase and may be disastrously postponed by storms, drouths, or pests. The result is that even the fertilizer recommendations which are a big improvement over used practices go unheeded.

The vast research now forming our foundation for better recommendations is proving that there are many farmers that are fast closing the old gap between recommendations and practices. Just to name a few—The "100 Bushel Corn Prescription" and "Sure-Fire Alfalfa Prescription" in Wisconsin are foremost examples.

The "X-Tra Yield" programs used in Minnesota, Illinois and Iowa have been most effective in stimulating farmers, especially club boys, to try for higher efficiency in the use of fertilizers.

#### EXTENSION METHODS OF PROVEN WORTH

By Geo. H. Enfield

Extension Service  
U.S. Department of Agriculture

In a presentation of this kind it would be folly for me to assume I had or knew the formula by which Extension agronomists or agents should operate to be most effective. Agronomists and Extension agents are different in training, ability, beliefs, ambition, their likes and dislikes, as well as the situation where they work.

Throughout the years, extension personnel has relied heavily upon demonstrations to introduce new ideas or changes that could be made to improve the farm living. Some might call this process a low pressure sales approach. Demonstrations afford an opportunity for farmers to come together to observe and discuss among themselves the merits and disadvantages of a new practice for their farms. True there are few orders taken or practices adopted at the demonstration, but the seed of a new practice is planted in the minds of those that attend.

This idea may grow in some minds without much further attention. In other minds the new ideas may perish or be covered up by weeds or washed away by a flood of get-rich-quick ideas or a pretty picture of life on a bed of roses. Most extension agents never let the demonstrations die with just the meeting. They have been used to arouse interest in the new or change of practice before the day of the meeting. They have been used as a subject of conversation at other meetings. They are the source of material for result stories within the area and often receive much wider coverage. Demonstrations often provide exhibit materi-

al for a long time after the demonstration is held.

Any demonstration that has been carefully planned should be evaluated in light of the circumstances under which it was carried out. The result should be either disseminated or compiled with other trials under similar conditions and the summary used to help farmers decide on the value of the practice for them.

Lately, certain special groups of extension specialists have pooled their resources and developed a package demonstration. A good example of this is the complete cotton demonstrations in the 10 cooperating Southern States. Here agronomists, soil conservationists, entomologists, pathologists and marketing specialists are working on the combined practices for a successful crop. This year, according to C. A. Vines, associate director of Arkansas, there will be 4,599 complete cotton demonstrations. In 1955 there were 3,552 such trials for the purpose of showing the results of making proper use of timely application of all applicable research designed to improve production and quality and lower production costs per unit.

The results of a study of 409 farms with 35,925 acres in cotton from 9 states showed the average yield per acre from demonstration to be 613 lbs. compared to state average of 375 lbs. It was also noted that the cost of production was lowered 7¢ per lb. Another example of a different demonstration is the Coastal Bermuda grass program of South Carolina and Georgia where a new crop is introduced with all the steps needed for success including fertilizer are pushed as a package deal.

Demonstrations of this kind bring together all the factors that should be given attention for most profitable returns. One practice helps to support the other and many times it's a more effective method because more people are working on a unified approach rather than a piece-meal affair where each agent is vying for the few dollars and, as a result, the increase for any one practice is smaller than expected. To make demonstrations effective in the community they should be arranged in such a way that there is extensive participation. It should be something that the people have already learned enough about to be aware of the possibilities of its true worth and become interested in the results.

Some of the very successful result demonstrations have made use of the younger people as cooperators. Their minds are usually more receptive to new ideas. They look at the results in what it would mean to their future rather than the cost or problems of the present. The younger generation is also effective in presenting new ideas to the older people. A good example of this is the nitrogen top dressing demonstrations conducted by many groups of the vocational agriculture boys in the Central States in recent years. Some of the things that stand out in these trials are that demonstrations should be simple, easy and completed, even up to having the boys tell their story to each other and the older farmers.

Contests have been looked upon by some as useless or of little value. Others have used them as effective tools to see production programs. The 5-acre corn contests of Indiana and the Pace Makers Club of Wisconsin have made it possible for the farmers themselves to set goals for their counties or neighborhoods. Usually these goals turn out to be records to be broken by challenges in the neighborhood.

Skillful operators have been able to introduce a large amount of educa-

tion into these contests in a palatable fashion. Some of the unique systems of checking results whereby a team from one area checks the fields of farms in another area have become a real force in moving recommended practices across fence lines. There are many contests run solely for contest sake or to distribute prizes or even advertising a particular product, but for the most part, I believe extension has tried to place the educational factor rather high among the results they wished to accomplish.

Soil classification has helped agents estimate the productive capacity of the soils with which they work. Coupled with production contests, the agents soon learn what can be expected from the various soil types and just about how much improvement they can expect to make by a change in management.

Soil and plant tissue tests have helped extension agents to become more accurate in their evaluation of the soil fertility status. This has helped them sharpen their recommendations to more accurately predict a profitable solution to the lime and fertilizer problem. Good illustrations of this come from Illinois where more than 469,000 samples were tested last year. North Carolina had 93,000, and Iowa and Nebraska have tried to make further refinements by studying moisture and fertilizer relationships. Some say this is individual service and the man probably would have used fertilizer or lime whether he had his soil tested or not. This I believe is a rather shortsighted evaluation because the more satisfaction the customer can obtain from his purchase of fertilizer and lime, the more willing he will be to apply other recommended supporting practices that are necessary for greatest returns from the fertilizer he uses.

Probably one of the weaknesses in our work has been so many times we were out to prove something or we wanted a particular practice to show a big increase over what has been customary in the past. Farmers want to know the whole truth and have it translated into what they could expect with use of practice on their farm and under their management. They want the results brought down to terms they can understand, not was there a significant increase, but what are the odds that they can expect to make two dollars for the one they invest in fertilizer applied at a given rate, method and date for a particular crop. How long will they need to wait to get their money back? They want to know not only the return per acre, but also for their farm. When they fail to get the expected results it retards them from accepting future ideas from such a source. This may be one reason why so many take on new ideas rather slowly. They must first get advice from a man they have learned they can trust.

The unified program developed by colleges and industry and other interested agencies has been a big help in teaching farmers about new practices that are beneficial to them. The various plant food societies such as the ones found in Georgia, Alabama, and many of the Southern States as well as the Middle West Soil Improvement Committee at Chicago have helped coordinate the efforts to a common understanding of the problems facing the farmers of their particular area and develop procedures for solution. The work of these agencies to reduce the unnecessary fertilizer ratios has been outstanding. This work has helped eliminate much of the confusion and some of the myths about plant food.

The educational work promoted by many agencies to bring an awareness of plant food deficiencies has also helped farmers to learn how they can determine for themselves some of the causes for their low crop yields. There are a good many times we do not

make as much out of this as we should. There are still a lot of people who confuse nitrogen starvation and dry weather.

The one thing that appears outstanding in closing the gap between research development and farm adoption is to have an extension agent enthusiastic about the program. He must be sold on the idea that it has outstanding merit for farmers he serves. He must have an imagination to find many ways of appeal that will reach the various segments of the farm population. His efforts must be continuous or his progress on closing the gap will slow down, stop, or even retreat, because the interest will be diverted to some other movement.

The lime program in Pennsylvania is a good example. It seems that extension people start and stop their agronomy programs with lime. In some cases they sift in a little between for good measure. Today Pennsylvania is outstanding in the use of lime compared to the other states of the nation. One out of every three farmers used some lime in 1954. Likewise they covered a high proportion of their cultivated land.

I would like to give one county example from Indiana. In Jefferson County about 25 years ago, there was a county agent who became enthused about the importance of lime for the farmers of his county. He left no stone unturned to move the liming program. It was important to those people. He felt so strongly about it that he had people living on acid soils feeding limestone to the children so they would grow up with better bones, better teeth, and stronger minds. He encouraged mineral mixtures for the livestock with extra lime. Nearly everyone outside the county thought that the people were too poor to buy lime, but they spent their money for it just the same. In less than 6 years that county became outstanding in the amount of limestone applied.

In 1939 the census showed Jefferson county used more tons of liming material than any of the other 91 counties of the State. I should add that this county was no more in need of lime than many of the others. The credit for the work must go to the efforts, enthusiasm, imagination and persistence of R. N. Thomas to move his people to adopt a practice that research had proven to be worthy of adopting, but the farmers had previously refrained from practicing.

Here we come to the conclusion that there are many channels to bring an impact upon the farm people to adopt proven fertilizer practices. To be successful everyone must work for a common objective. It also means it is a lot easier if you have a big team. Indiana, altho a rather small state in the nation, now leads all others in the total pounds of available plant food applied and also has the largest number of acres of fertilized land. The state fairly reeks with fertilizer and fertilizer salesmen and fertilizer educators. In that state even the economists have joined the ranks and preach about the bargain in fertilizer. It takes a big, fast moving, well-coordinated team to do a big job.

#### FACTORS AFFECTING DIFFUSION OF RECOMMENDED PRACTICES

By E. A. Wilkening

University of Wisconsin  
Madison, Wis.

The adoption of recommended practices is regarded as a process which occurs over a period of time. During this process, the farmer becomes aware of the new practice, becomes interested in it, weighs its advantages and disadvantages, tries it out, and finally, adopts it completely.

The mass media are effective in the awareness and interest stages; neighbors and friends are most important in the decision-making stage; agricultural agencies and commercial dealers are important in the trial stage. Also

ere are var  
formation  
actices.  
The proces  
actices is in  
well as c  
unity stand  
ips influenc  
new practi  
communicati  
em. The n  
ontrol in a c  
te of accep  
ractices.

Character  
farmers and  
ated to the  
mended pra  
actices es  
be younger  
schooling, h  
tive in farm  
ticipate in  
They are a  
high value  
ment, mode  
business as

The first  
practices ar  
upon the a  
ther forma  
ormation. T  
likely to se  
early adopte  
ers. The rat  
ice in a c  
fluenced by  
which the e  
gate inform  
to their nei

CO  
AVABy V  
Agri  
Kentu

For thirt  
tension sta  
Kentucky,  
Paducah, a  
cialist in a  
4 years I h  
representat  
ers Associ  
unique in t  
as I know,  
in which th  
statewide  
tive.

My inter  
the proper  
that my b  
ers often a  
for—the b  
dealers.

My prin  
representa  
farmers in  
and I can  
general kn  
tied to fe  
the wise p  
efficient cr

Two y  
published  
"Profits  
distribut  
ers and a  
we showe  
ed in n  
usually r  
creased  
poor soil  
better qu  
\$16.00 fo  
tillizer, a  
turns mi  
I might  
finance f  
of no cas  
of a fina  
to get a  
fertilizer  
as an ov  
credit h  
loans in  
point.

Imports  
the exper  
purpose r  
part of a  
gram. Th  
from the  
economica  
many der  
lar. One



There are variations in the sources of information for different types of practices.

The process of adoption of new practices is influenced by many social factors as well as economic factors. Community standards and social relationships influence the degree of interest in new practices and the extent of communication of information about them. The nature of leadership and control in a community influences the rate of acceptance of new ideas and practices.

**Characteristics of individual farmers and their families are related to their adoption of recommended practices. Those who adopt practices early are more likely to be younger, have more formal schooling, have larger farms, be active in farm organizations and participate in educational programs. They are also more likely to place high value upon individual achievement, modern living, and upon the business aspect of farming.**

The first to adopt recommended practices are more likely to depend upon the agricultural agencies and other formalized sources for their information. Those who follow are more likely to seek information from the early adopters and from other farmers. The rate of adoption of a practice in a community or area is influenced by the effectiveness with which the early adopters communicate information about the practice to their neighbors.

#### COMPETITION FOR AVAILABLE CAPITAL

By Wm. C. Johnstone

Agricultural Representative  
Kentucky Bankers Association

For thirty years I was on the extension staff of the University of Kentucky, first as county agent at Paducah, and later as extension specialist in agronomy. During the past 4 years I have been the agricultural representative of the Kentucky Bankers Association, a position which is unique in this country because, as far as I know, Kentucky is the only state in which the bankers have a full time statewide Agricultural Representative.

My interest in wise land-use and the proper use of fertilizer is so great that my banker friends and employers often ask me who I am working for—the bankers or the fertilizer dealers.

My principal job as agricultural representative is to aid Kentucky farmers in increasing their income, and I can assure you that bankers in general know how closely profits are tied to fertility and how important the wise purchase of plant food is to efficient crop production.

Two years ago our association published a booklet entitled, "Profits from Fertile Soils," and distributed it widely among bankers and agricultural workers. In it, we showed that each dollar invested in needed plant food would usually return about \$4.00 in increased yields. With tobacco, on poor soils, the increased yield and better quality would usually return \$16.00 for each dollar spent on fertilizer, and, in some cases, the returns might run as high as 23 to 1. I might add that bankers like to finance fertilizer loans and I know of no case where a regular patron of a financial institution has failed to get adequate credit for needed fertilizer unless other factors, such as an over-burden of debt or poor credit history, have made such loans inadvisable from a risk standpoint.

Important as is the use of fertilizer, the expenditure of funds for that purpose must be looked upon as a part of an overall management program. There are other factors, aside from the use of fertilizer, involved in economical production, and there are many demands for the farmer's dollar. One of his most important deci-

sions is how best to distribute his production expenditures.

Of great concern to the average farmer, and to his banker too, is how to squeeze the essential costs of living and farm operation out of the ever-shrinking margin of farm profits. Probably the big factor in closing the gap between the use of fertilizer and recommended practices is closely related to the problem of widening the gap between the costs of living and farming and the income derived from farming. If we can find the answer to the latter we will have solved the former.

Most farmers, I believe, know the value of fertilizers and would like to use the recommended amount and kinds. They like to see and to harvest good crops; they like to build their soil. Many of them, though, are like the old farmer we used to hear about—"he didn't need a county agent to tell him what to do 'cause he wasn't farming half as well as he knew how now."

Let's consider some of the financial

problems that face the farmer in his desire to close the gap in his fertilizer practices.

First, there are his essential cash expenses which must be met if he is to stay in business. They are:

**Taxes.** For each \$100 paid on farm property and automotive taxes in 1947 he paid \$166 in 1954.

**Debt service.** In 1947 he paid \$225 million in servicing farm real estate mortgages. In 1955 he paid \$409.5 million, an increase of 77%. This increase is due to the higher debt and higher interest rates. On non-real-estate loans the cost has been even more striking. On January 1, 1947 farmers owed \$1,953 million on production loans. On January 1, 1956 that debt had soared to \$4,420 million, an increase of 226% on which they are paying a much higher rate of interest.

**Family living cost.** For every \$100 spent in September, 1947, he spent \$116 in September, 1956. These three

items come first even though some other needed expenditures can not be made.

Second, there are some essential expenditures for production items such as seed, feed, fertilizer, fuel, machinery, repairs and labor.

Since 1947 the average cost of such items has increased about 15%. It is significant that such farm produced items as feed, seed and livestock declined about 10% whereas non-farm produced items such as machinery, fertilizer and motor supplies increased about 25%. It is also significant—and to the credit of the fertilizer industry—that the cost of fertilizer has increased only 5%—which is much less than any other important manufactured item. (Machinery costs for instance are up about 40% since 1947). Farm wages have increased 25%.

The farmer's total production expenses in the nine years, 1947 to 1955, increased from \$16.8 billion to

# HEPTACHLOR VERSATILITY

## Means More Profits For You!

### HERE'S WHY—

Heptachlor controls insects in all these classifications:

FORAGE INSECTS  
SOIL INSECTS  
COTTON INSECTS  
VEGETABLE INSECTS

GRASSHOPPERS  
SEED INSECTS  
MOSQUITOES  
CITRUS INSECTS

With this complete control you can—

- ✓ LOWER PRODUCTION COSTS
- ✓ HAVE LESS MONEY IN INVENTORIES
- ✓ SIMPLIFY MERCHANDISING AND SELLING
- ✓ CONCENTRATE SALES PROMOTION EFFORTS

#### CASH IN ON HEPTACHLOR IN 1957

1957 National Advertising and Promotion paves the way. Heptachlor's effectiveness, widely proved at Experiment Stations and in actual use throughout the country, backs up sales. For more market potential . . . It's Heptachlor in 1957.



**VELSICOL CHEMICAL CORPORATION**

REPRESENTATIVES IN PRINCIPAL CITIES  
General Offices and Laboratories 330 East Grand Avenue, Chicago 1, Illinois  
Export Division 350 Fifth Ave., New York 1, N.Y.



\$21.6 billion, a net increase of \$4.8 billion.

While this was happening farm receipts from marketing dropped from \$30 billion down to \$29.2 billion.

Let me mention some other important items which compete with fertilizers for the farmers' dollar, some of which may be almost as essential as fertilizers in their desire for production efficiency—all of which, though must come from the farmers' gross income. They are:

a. The purchase of additional land—needed for efficient operation.

b. Capital improvements, such as water development, irrigation, bulk tanks and buildings.

c. A desire for higher standards of living, stimulated by: (a) Keeping up with his city brother. (b) Glamorous advertising and promotion of the "buy today—pay tomorrow" policy.

d. Adoption of other modern, improved practices such as certified seed, insect and disease control and new developments in animal nutrition.

There is one question which I wish to throw out. Is it desirable, at this time, to close the gap? While recognizing that it might be desirable for individual farmers it may not be best for agriculture in general. We are now struggling with a surplus of agricultural commodities. In a recent publication by John D. Black and others, it was shown that the rate of annual increase in the use of fertilizer was slowing down, and, this statement was added: "The rate will have to decline further; otherwise over twice as much will be used in 1965 as was used in 1955, and farm output will be in excess of the 17% increase needed, especially if other agriculture technology advances with

it at the same rate as in the recent past."

You are familiar with the USDA report entitled "Agriculture's Capacity to Produce" in which it was estimated that the total production of agricultural commodities in the U.S. could be increased 86% just by applying the presently known technological know-how; this, in face of an estimated needed increase of 17%. So, I ask, is it desirable for agriculture to close the gap in fertilizer usage and, if so, what other technological advances should be slowed up or what sociological advances should be adopted to draw the unneeded farm population away from agriculture at a faster rate than it is now going?

### HOW TO DO A "MILLION THINGS"

By Jim Roe

E. H. Brown Advertising Agency  
Chicago, Ill.

People in the agricultural chemical trade who say they have "a million things to do," may be right. To do the educational and selling job that needs to be done, it would be necessary to make a million farm visits.

How do you go about this task?

We're talking about impacts on men's minds... about how to make a man do something we think he should do. Probably something different than he's doing now, and usually something that costs him some of his own money to try.

The specific problem is how to get farmers to maintain optimum soil fertility levels, and how to use mass media to accomplish this purpose.

Mass media allow us to make a million "visits" a day. Physically and economically, it's the only possible way to do it.

So, how do we make sure we use mass media properly? It seems that there are three things to keep in focus here. Let's take a glimpse at some principles; some techniques and methods of using the principles; and some examples.

One must always keep in mind what must be said and how to say it, and also keep in mind the persons or groups to whom the message must be addressed.

When thinking of to whom the message is directed, one must have a good picture of the organization itself; its salesmen and dealers; its thought leaders; and its customers.

As to techniques and methods, here are a few that will help to get the messages across:

Make sure the idea is really new and better; believe in your audience, think in terms of the persons in the audience, their problems, their interests. Simplify. Push one idea at a time. Write or talk clearly, in simple language, and short sentences.

Suggest action and be specific. Keep accurate, believable. Repeat, repeat, repeat. Make it a campaign. Use several methods of approach, each pushing the one central idea. Convince a man he can do it, and make him want to do it.

Once a man wants to do things better, there are all kinds of editorial approaches to help him. Chief among these are testimonials, how it was done, how easily it was done, "everybody else is doing it," and "why you should do it."

There are still other convincing statements to stir action. Tell the farmer that "the leading, most successful farmers are doing it this way." Or, "here is a specific reward you will gain," or "research shows this is the best way to do the job."

Once in awhile, one might even use the approach, "you should be ashamed of yourself if you aren't doing it this way."

Suppose you have done these things, and you wonder if any ground has been gained. It is impossible to put a set of calipers on a man's mind. You cannot work out a genetic-type formula and know if you com-

bine item of information A, with method B, you will get action AB. Human motivation is a complex thing, and a good share of the time the person motivated cannot accurately tell you what caused him to take a specific action.

In spite of these difficulties, the communications profession does have a sizable and varied kit of research tools.

One of these tools is the readership study, the audience survey. Is anybody reading, is anybody listening? With some fair degree of accuracy, this can be mathematically determined. You can try out different approaches, too, to see which pulls best.

There are deeper studies, too. And, we need them, for the fact that a person has read an article, or has heard a broadcast, doesn't necessarily mean that he bought the idea, or rushed out to do what was recommended.

To get at these deeper reactions, motivation studies are used. Some can be done by mail. Well-framed questionnaires will often give an insight into just what a given group of people considers important. Or, to go deeper still the "depth interview" may be used.

Thus it is evident that the people who pilot our communications do not always have to fly by the seat of their pants. There are guideposts, and they remind us that we must know the problems, find the answers to those problems, and present the answers.

As long as we solve a problem, we'll be read, listened to, and our advice heeded. If we don't, we won't.

How about advertising? For the really best effects, those editorial approaches we looked at should work in a blend with advertising space. In general, editors can arouse interest, educate, jar a man out of a rut, make him reach for that next higher rung on the ladder.

It is at this point that advertising should take over. Editorial matter convinces a man he should use hybrid corn instead of open pollinated. The advertising takes the next, and logical, step. It gets more specific. Which hybrid? Where can I get it?

Or fertilizer. Who makes it? How well do they make it? Where can I get it? In what forms does it come? What are the advantages of the different forms?

One of the best examples of how information on various products was disseminated over a wide area, was in connection with the feat of Lamar Ratliff, Mississippi farm boy, who harvested 304 bushels of corn from a single measured acre. Practically everyone in agriculture heard of this, and details about what he did to get this production were told and retold via all kinds of media.

It is true that when you have a million things to do, a million farm visits to make, you can't afford to go yourself. You must send the message on a printed page or on the air waves.

### NITROGEN ON RANGE

(Continued from page 1)

tall grass is desirable on ranges, especially for winter grazing.

Nitrogen fertilizer, applied to heavily grazed native grasses, enabled these ranges to improve much more rapidly than did unfertilized ranges that were not grazed. The fertilizer also improved properly grazed pastures.

Percentage of crude protein in range herbage increased significantly when 90 lb. nitrogen was applied per acre. Applications at the 30-lb. rate apparently supplied only enough nitrogen for vigorous plant growth, leaving none for an increase in protein content.

### MILLER CHEMICAL

(Continued from page 1)

business in Eastern Pennsylvania for many years from its plants at Hanover, Pa.; Whiteford, Md.; and Baltimore, Md. Other Miller plants are located at Salisbury, Md., and Gaithersburg, Md. They produce a wide variety of chemicals for agriculture; including products for fruits, vegetables, tobacco, livestock, dairy, forage, soil treatment, and other agricultural uses. They also produce related products used by home gardeners. Their products are distributed throughout the East.

In addition to the Ephrata facilities, Miller recently has established a warehouse for pesticides at the new P. L. Rohrer & Bro. Co. warehouse at Smoketown, Pa. Sales from both points will be directed by O. Neuman, Jr., vice president of Miller Chemical & Fertilizer Corp., with the help of Theodore N. Minnich of Lancaster, Pa., who was associated with the Lancaster Bone Fertilizer Co. for many years, and Elwood K. Funk, Leola, Pa., who has been with the Miller company for some time.

### Plans Set for Texas Turfgrass Conference

COLLEGE STATION, TEXAS—Final plans are taking shape for the 11th Annual Texas Turfgrass Conference to be held at Texas A&M College Dec. 10-12, according to Dr. E. C. Holt of the agronomy department. Dr. Holt is chairman for the conference.

Among the speakers who will appear on the program is Dr. Gene C. Nutter, turf specialist with the University of Florida, who will give a paper on soil sterilization practices in turf, and will lead a panel discussion on chemical weed and nematode control in turf.

Others include Dr. O. J. Noer, agronomist with the Milwaukee Sewerage Commission, who will give a paper on case histories of turf improvement programs, and will lead a panel discussion on irrigation, aeration and fertility. Robert M. Williams, Beverly Country Club, Chicago, will discuss modern maintenance methods with the golf course section of the group.

Other features, according to Dr. Holt, will include reports on studies of soil mixtures for putting greens and Dallisgrass control in Bermuda-grass turf. There also will be discussions on weather, water quality problems as related to turf, and shade tree maintenance.

### New Sales Representative Named by National Potash

NEW YORK—William C. Boswell has joined National Potash Co. as sales representative in the south and southwestern states, William B. Porterfield, Jr., vice president and sales manager, has announced.

Mr. Boswell will cover the states of Mississippi, Louisiana, Texas and Arkansas. He will make his headquarters at National's offices in Montgomery, Ala. The new appointee is a graduate of the University of Alabama and has been in the insurance business for the past several years, and served with the U.S. Air Force in World War II.


National Potash, jointly owned by Freeport Sulphur Co. and Pittsburgh Consolidation Coal Co., is constructing facilities to produce potash from deposits near Carlsbad, N.M. Production is scheduled to begin early in 1957.

### DIVIDEND DECLARED


MIDLAND, MICH.—The Board of Directors of the Dow Chemical Co. has declared a dividend of 30¢ per share on its common stock payable Jan. 15, 1957, to stockholders of record at the close of business on Dec. 14, 1956.

the **Broyhill**®

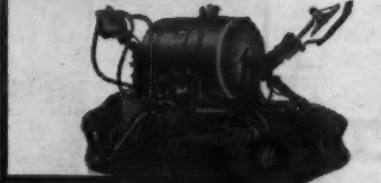
**CUSTOM QUALITY  
Agricultural Chemical  
Application Equipment**




5B Trailer



Truck Applicator



Model FTC



Nurse Tank

For  
Aqua Ammonia  
Nitrogen Solutions  
Balanced Mix Solutions  
Insecticide, Weedicide  
Mounted  
on  
Trailer - Truck - Tractor  
Rubber Lined Tanks

DAKOTA CITY, NEBRASKA

Catalog Available



# Better Selling

**Richer  
Fields for  
Dealers**

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

## Retail Farm Supply Dealers Can Solve Mutual Problems Through Local Organizations

By AL P. NELSON  
Croplife Special Writer

The other day a hardware merchant who is a friend of mine happened to mention a meeting he attended of his county hardware dealers club. The furniture dealer in my town recently picked up a store tour idea from a meeting of the county furniture dealers club. Just about every business man in the little town I live in belongs to some state association and a district club as well, that is, just about everyone except the fertilizer dealer.

Why doesn't he? The reason is simple—there is no fertilizer district club in this area, but there should be.

Perhaps one reason why there is no club in my area is that the fertilizer industry from a retail standpoint as we know it is relatively new. Fertilizer was a sideline with many dealers in various lines of business, but lately, as American farmers have begun using more fertilizer, insecticides and related products, the fertilizer dealer has assumed a bigger role in his community. And he has problems as well as other retailers, problems that can be discussed at a district dealer club.

Now obviously a good dealer club is not going to solve every problem a dealer has. But it is going to solve some of them. Here are a few of the things which a fertilizer dealers' district club can do and what it cannot do:

What a club cannot accomplish—Dealers cannot organize a club for the purpose of setting prices. It's against the law. Don't try it. In this country free competition is the rule.

You can't tell dealers where they can sell their fertilizer, or on what terms. You are not the dictator concerning the way a man runs his business. Your only hope is to keep emphasizing time and again this one thing—"Make a profit on every sale. That is what we are in business for."

You cannot institute any policy or program designed to keep out competition, or to make it tough for any dealer in the region to make a living, regardless of whether you like what he is doing or not. Here again you may run afoul of the law if you do.

What a dealers district club can do—

You can meet your competitor. Through a district club you can meet most of your competitors, get to know them as human beings, as well as men engaged in the same business for a profit. And when you learn to know a person better, you can usually work together better, with mutual benefit.

In a district club, you soon learn how and why a man thinks as he does. Thus you will know him better, and know how to deal with him, and he with you.

Dealers in a club can do group advertising for mutual benefit. Some farm supply clubs are doing this very effectively. For instance, a district club, pro rating the costs, can buy a full or half page ad in a newspaper and get plus attention from farmers, whereas smaller,

individual dealer ads in a newspaper would not get this extra attention.

Some clubs advertise credit ratings, urging all customers to keep their credit ratings satisfactory so that they can purchase fertilizer and other needs when they want them and in the right amounts at the right terms. When the farmers see that all the fertilizer dealers in the area, or those who belong to the club, back such a stand, they will think more about the importance of good credit.

Likewise, the clubs can publish large scale ads, if they wish, concerning the reasons for fall purchase and use of fertilizer. Prorated such large ads will not cost the individual dealer very much. They, like the credit ads, will do the individual dealer much more good than ads on the same subjects which he would publish.

Exchange credit information. It is possible for a district club to set up its own credit bureau to exchange credit information. This can be very valuable to every participating member and save money for him. Credit records need to be kept inviolate except for qualified members' use to promote their dealings with customers.

Dealer education. Alert club officers can sponsor a dealer education program showing dealers that they are really not competitors in the true sense of the word, but really are partners in a great industry. Any dealer can see, if he is told often enough by experts, that this is an expanding industry, and that farmers are steadily using more of the products which the dealer sells.

It is the job of a dealers club to find ways to show farmers how they can use more fertilizer and insecticides and other related supplies in a profitable manner. As this is done, there is going to be more business for every dealer who exercises sound business judgment and backs it up with action.

Exercise business imagination. Dr. Einstein once said that imagination is the greatest force inside man. If this is true then at a livewire dealer club, fertilizer dealers can talk over their common problems and often go back to their own business with a fresh viewpoint. This fresh viewpoint, gained through sustained discussion with other dealers, may give a dealer just the idea he needs to revamp his business to achieve greater sales and at a bigger, total profit.

Yes, when you weigh the things a dealer club cannot accomplish against what it can accomplish, the scales tip heavily in favor of the latter.

### FERTILIZER SALES UP

LEXINGTON, KY.—Fertilizer sales for the month of July, 1956, were considerably over those of the like period of 1955, the state's agricultural experiment station here has announced. In 1956, the total of mixed fertilizers and straight materials came to 5,336 tons, as compared to 5,180 during the same period last year.



### SHOP TALK

### OVER THE COUNTER

### FOR THE DEALER

By EMMET J. HOFFMAN  
Croplife Merchandising Editor

Have you ever walked into a store, spotted the owner and waited for a chance to talk to him? And has he passed you by without recognition, until it came your turn to be waited on?

On the other hand, have you ever had to wait in a store, only to have the clerk or owner flash you a warm welcoming smile, even though he was busy waiting on another customer? That welcome makes you feel better, doesn't it; makes you content to wait your turn? You look forward to doing business with such a clerk and store owner.

This example witnesses the power of personality, of well adjusted people, conscious of the power of friendliness and service. These are priceless factors in any store. Some stores have it; others haven't.

You no doubt have been in stores where the owners peered at each newcomer entering the store as though suspicious he might be a salesman. That attitude seems to chill the entire place and customers don't like that attitude one bit. One would think that such an owner feels that the entire world was out to "do" him, instead of his being in business to profit as he served.

One retailer who operates a large successful store states: "We have personal contact with our customer just as soon as he enters the store. Stationed at a service booth we have a man who just bubbles with personality and makes the customer feel at home before he even has a chance to spend a cent. His duties are to cash checks, handle all complaints and give out information. When the customer leaves that service post he is to feel well satisfied and happy, no matter what the cost. The person who works in this department is better known in our market as the store 'chaplain.' We feel that this personal contact is very important as it makes the customer feel that he or she is wanted, and the average chain store has forgotten this."

Isn't this excellent psychology—to make the customer feel satisfied and happy before he has even spent a cent in your store? For the farm supply dealer this procedure may be a smile, a few cheery words of greeting, a habit of being cheerful all the time, of not wearing your troubles all over your face and in all your manners.

### Win Steady Customers

When the farmer steps into your store, Mr. Dealer, he may buy up to \$1,000 or more of merchandise from you in one year, depending on how you treat him. If he sees that you are friendly, that you are interested in him and his problems, and not thinking primarily and constantly of yourself, then he very likely will become a regular customer.

Business is not always a cold proposition. Sure, you have to make a profit, but the actual welcoming and serving of the customer can be a cheerful act, one which impresses and wins the customer, and which often puts him in the mood to buy additional needs from you.

Here is an example of how a dealer can show a bit of extra courtesy: A

(Continued on page 12)



By RAYMOND ROSSON

County Agent, Washington County, Tenn.

Who wants "business as usual"? Remember the wheel of Providence is always in motion, and the spoke that is on top today will be under tomorrow . . . today is not yesterday . . . success or failure in business is caused more by the mental attitude even than mental capacities.

Confidence is something you can take home with you . . . confidence is faith. Our faith is based on ability to serve people. We have faith in our way of merchandising and service.

The profits we earn are based on the turn-over of public relations. I know a dealer of farm supplies, that is tops in public relations. He takes an interest in all farm enterprises, and he keeps well posted. He contacts the agricultural workers often.

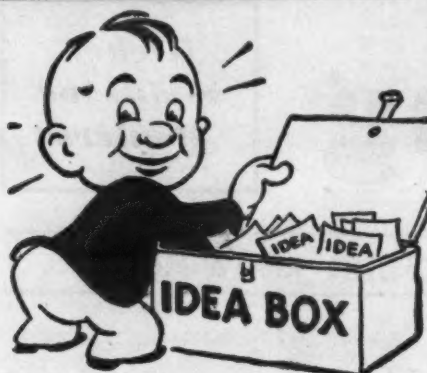
Believe it or not, he suggests that the farmer use as much plant food under his crops as the agricultural agent suggests. Many, many times I have suggested a certain amount of plant food for corn, wheat, tobacco, alfalfa or pasture to a farmer and the dealer would suggest that he use at least one third to one half less, and that would be the amount the farmer would buy.

Let's trim our wicks, for an increased per capita income on the farms of America . . . for greater security . . . improved educational opportunities . . . finer spiritual values . . . stronger community life and more dignity and contentment in country living. We have a big job to do together.

### EXTENSION EXPERT RETIRES

DURHAM, N.H.—Prof. J. R. Heppler, extension home garden specialist for many years, recently retired from his duties with the University of New Hampshire.





## What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

### No. 6507—Freight Car Apron

The Lite Line Industries division, Copperloy Corp., has announced the development of a new flat apron. Designed to use as bridging between flat cars in truck-rail piggy back service, the aprons can also be used for other applications where bridging is necessary for the movement of heavily loaded vehicles. The aprons are used in pairs. Each weighs less than 100 lb. and measures 30 by 56 in. Other special sizes are also available. Check No. 6507 on the coupon and mail it to Croplife to receive more complete details.

### No. 6506—Farm Service Bulletins

A series of bulletins covering a wide variety of agricultural subjects of interest to farmers in New York, New Jersey, Pennsylvania and Delaware, is being offered by the I. P. Thomas Division, Pennsylvania Salt Manufacturing Co. Specific information for the 4-state area will be given in bulletins covering crop cultivation, soils and soil testing, fertilizers, irrigation, seed treating and numerous related topics. Up-to-date material in the bulletins, gathered from educational, governmental and other authoritative sources, has been condensed, in most cases to a single page,

simplified and written in non-technical language for easy reference, according to company officials. In addition, the experience of successful local farmers has been consulted and the practical knowledge acquired by I. P. Thomas during almost 100 years in the manufacture and use of fertilizer in this 4-state area, has been incorporated in the bulletins. The first series of three bulletins, "Soil Sampling for Soil Tests," "Granular or Pelletized Fertilizers," and "Organic Matter," is now available to dealers, agents and others interested. Check No. 6506 on the coupon and mail it to Croplife.

### No. 6508—Liquid Plant Food

The H. D. Campbell Co. is now offering a ready-to-use liquid plant food in a household-size plastic squeeze container. The product, called by the trade name of Gro-Green, is packaged in a 4-oz. size that is suited for the feeding of potted plants, flowers and for similar household uses. The liquid is sprayed in small amounts directly on the leaves of the plant after watering. Company officials state that "Foliage Dietene," an ingredient found in the product, makes possible successful leaf feeding by breaking down the surface tension of leaves and enabling plant nutrients to be quickly and completely absorbed by the leaf surface. To secure more

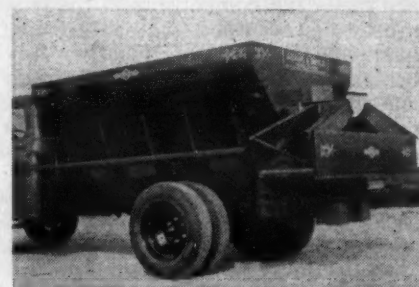
complete information about the product and quantity price quotations check No. 6508 on the coupon and mail it to Croplife.

### Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

### No. 6502—Fertilizer Spreader

The Adams & Doyle Equipment Manufacturing Co. announces the production of a fertilizer, lime and phosphate spreader claimed to be rugged enough for custom spreading by dealers and precision designed and built to give many years of dependable performance under any conditions. Gear cases are of hardened steel, with individually cut and spiral matched gears. The 21-in. bottom is said to permit an even spread of materials in any amount from 100 lb. to four tons



per acre. Single or double fan units can be interchanged and the fertilizer hood is 20 ft. wide with open ends for extra coverage. For highway travel the hood folds to less than eight feet. Sizes range from 7 ft. for the ¾ ton pick-up to 12-ft. sizes for tandem trucks. Secure specifications and price sheets by checking No. 6502 on the coupon and mailing it to Croplife.

### No. 6498—Insecticide Spray Gun

The R. C. Can Co. has introduced an insecticide spray gun with a number of new features. Among the features claimed are: It sprays the insecticide at an extreme angle for hitting the underside of foliage; 15 holes on the underside of the discharge plug eliminate clogging; a 1¼-in. friction plug comes off for refilling; it has a wax coated inner tube; it has a special felt inner valve and a patented bellows valve. Secure additional information by checking No. 6498 on the coupon and mailing it to Croplife.

### No. 6504—Fertilizer Scale

A new automatic fertilizer bagging scale, capable of bagging up to 24 sacks per minute, is described and illustrated in a new two-page, two-

color product data sheet, No. 5601, now offered by the Richardson Scale Co. The data sheet discusses such features as: Design, automatic belt feeder and discharge, construction and maintenance. Specifications are listed in a separate table. The data sheet is illustrated with a photograph of the model as well as a dimensional drawing. For a copy of the bulletin check No. 6504 on the coupon and mail it to Croplife.

### No. 6503—Applicator

The Larson Machine Co. announces details of its new applicator for applying fertilizers, insecticides and herbicides. The unit is called by the trade name, Larson Trailer-Type unit with Knife Bar applicator. Deep soil applications can be made by the use of the knife bar, company officials state. Lifting the knife bar out of the ground permits the use of the unit as a regular sprayer. The unit has a



220-gal. tank, V-type trailer and pump. The pressure regulator is in front of the tank directly behind the tractor operator. Details are available by checking No. 6503 on the coupon and mailing it to Croplife.

### No. 6499—Acid Pump

Dorr-Oliver, Inc., announces the availability of a new two-color, six-page bulletin, "The Olivite Acid Handling Pump." The bulletin describes the design features, corrosion-resistant materials of construction, applications, sizes and capacities of the acid handling pump. In addition, it contains equipment photographs, cross-sectional wash drawings of the unit and performance and power requirement graphs. The capacity of the pump ranges from 5-1,400 gpm with hydraulic heads up to 120 ft. The extremely wide range of flows and heads is possible through the availability of three pump sizes—1½ in., 2 in. and 4 in., plus a choice of varying diameter impellers. All sizes may be ordered with either direct or V-belt drive and bases for both types. Secure more details by checking No. 6499 on the coupon and mailing it to Croplife.

### No. 6505—Emergency Light Unit

A redesigned automatic emergency lighting unit for plants and other buildings where an extra margin of



safety is required has been announced by the General Scientific Equipment Co. The unit is powered by a storage

Send me information on the items marked:

- |   |  |
|---|--|
| <input type="checkbox"/> No. 5573—Lift Gate         | <input type="checkbox"/> No. 6501—Fork Truck |
| <input type="checkbox"/> No. 5592—Catalog           | <input type="checkbox"/> No. 6502—Spreader   |
| <input type="checkbox"/> No. 6495—Booklet           | <input type="checkbox"/> No. 6503—Applicator |
| <input type="checkbox"/> No. 6496—Process Control   | <input type="checkbox"/> No. 6504—Scale      |
| <input type="checkbox"/> No. 6497—Valve Closure     | <input type="checkbox"/> No. 6505—Light Unit |
| <input type="checkbox"/> No. 6498—Spray Gun         | <input type="checkbox"/> No. 6506—Bulletins  |
| <input type="checkbox"/> No. 6499—Acid Pump         | <input type="checkbox"/> No. 6507—Car Apron  |
| <input type="checkbox"/> No. 6500—Information Cards | <input type="checkbox"/> No. 6508—Plant Food |

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS  
PERMIT No. 2  
(Sec. 349,  
P. L. & R.)  
MINNEAPOLIS,  
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept.

Minneapolis 1, Minn.



## What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

The California Fertilizer Assn. met at Coronado, Cal. Nov. 11-13, and was told that extra sales efforts are needed before the industry will be able to reach its potential which in 1975 should amount to more than 40 million tons. The convention attracted a record crowd coming not only from the west coast, but from other parts of the country, as well.

Production began at the first pyrethrum extraction plant in Belgian Congo, located at Bukavu, it was announced. The new plant is equipped to extract pyrethrins from 2,700,000 pounds of blossoms a year.

Grassland farming was cited as being of great importance to the economy of the south, by a speaker at the Mississippi Fertilizer and Agricultural workers conference at Biloxi.

The American Society of Agronomy, in its 48th annual meeting in Cincinnati, featured a panel discussing reasons why fertilizer use fails to come up to state recommendations. Technical papers at other sessions dealt with minor elements in plant food, soil physics and other nutritional problems having to do with crops.

The American Potash Institute reported that deliveries of potash materials for the first nine months of 1956 were about 3% over that of the same period in the previous year. Total deliveries by U.S. potash producers and importers amounted to 2,781,593 tons, the report said.

Greater selling efforts and the development of new markets will increase the use of anhydrous ammonia, members at the sixth annual meeting of the Agricultural Ammonia Institute were told at the Atlanta convention. More than 500 persons were in attendance at the meeting.

Production of various chemicals used in agriculture was reported by the U.S. Department of Commerce to be on the increase, for the most part, during the first half of 1956. However, stocks of many of the materials, as well as finished goods were apparently at higher levels at the end of the summer season than they were a year ago.

Lion Oil Co. division of Monsanto Chemical Co. announced that construction had begun on its new nitric acid concentrator at El Dorado, Ark.

The Canadian Agricultural Chemicals Assn., meeting at Niagara Falls, Ont., heard first hand testimony from Canadian farmers as to why some make full use of chemical aids to farming, on one hand, and why others fail to use these aids in their operations. The meeting was held Oct. 16-18.

W. F. Price, Swift & Co., Plant Food Div., in an article first presented before the American Assn. of Fertilizer Control Officials, and reprinted in Croplife, said that the plant food industry stands to gain very little from a change from calculating in terms of the oxides to the elemental.

Dr. Earl Butz, assistant secretary of agriculture, told the Middle West Soil Improvement Committee in Chicago, that the fertilizer industry stands to gain as much as 350,000 tons of fertilizer in extra sales through the soil bank.

Lamar Ratliff, 17-year-old Mississippi farm boy, harvested 257.1 bu. corn from a single acre, for his second-best try in a number of years. (His record was 304 bu. in 1955.)

A new parasitic weed, Striga, has been found in South Carolina, the JSDA announced. This weed, if allowed to spread, can cause great damage to corn and sugar crops.

A new model state fertilizer bill, which would change fertilizer guarantees for phosphorus and potassium from an oxide to the elemental basis, was approved by the Association of American Fertilizer Control Officials at its annual meeting in Washington. J. D. Patterson, Salem, Ore., was elected president of the group.

E. O. Burroughs, Jr., Royster Guano Co., Norfolk, Va., was named chairman of the fertilizer section of the National Safety Council . . . Harry J. Fisher, New Haven, Conn., was elected president of the Association of American Pesticide Control Officials.

The meeting of the fertilizer industry round table brought out up-to-date information on modern plant food manufacturing techniques during its three-day convention in Washington, D.C. About 300 persons were in attendance to represent all segments of the manufacturing industry.

A new name, "The National Fertilizer Solutions Assn." was adopted to designate a new group formed by the consolidation of the former National Nitrogen Solutions Assn. and a group of liquid complete fertilizer makers. The convention was held at Sioux City, Iowa, with some 300 persons registered.

Two new antibiotics, Anisomycin and Griseofulvin were successful in controlling powdery mildew of snap beans in greenhouse tests by the USDA, it was announced.

A U.S. Department of Agriculture survey turned up additional areas in New Jersey, Pennsylvania and New York that will need gypsy moth control measures in 1957. Plans call for from two to four times as much insecticidal spraying in 1957 as in 1956. . . Consignment selling and guaranteed merchandising sales were condemned during a session at the annual meeting of the Carolinas-Virginia Pesticide Formulators Assn. in Pinehurst, N.C.

Grasshoppers posed a serious threat in New Mexico for 1957, on 2½ million acres of rangeland, and 196,000 acres of croplands in the state. A wide area of the state is affected in the insect threat.

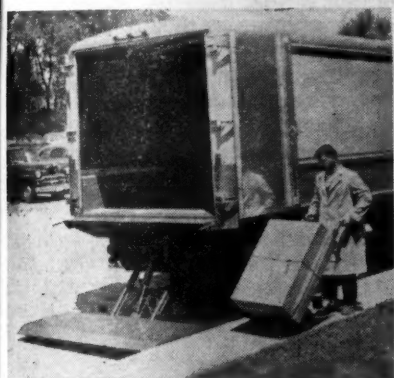
battery built into the portable set. A trickle charger automatically maintains the charge of the battery. A built-in hydrometer indicates the state of the battery at a glance. The unit plugs into an A.C. circuit. The lights are sealed beam and are claim-ants to provide service for 10 hours. For more complete information check No. 6505 on the coupon and mail it to this publication.

### No. 6500—Information Cards

Clemson Agricultural College and the extension service have prepared information cards to emphasize their time and fertilizer program in 1957. The cards are designed for posting in fertilizer dealers' offices. Currently available are cards with the following titles: "How Much Does My Nitrogen Cost?" and "1956 Fall Planting Schedule." The state's agronomists state that "we want our farmers to make efficient use of more plant food and more lime in order to increase the state's farm income." The cards are designed for use by the fertilizer industry representatives for distribution and display. To receive available cards check No. 6500 on the coupon and mail it to Croplife.

### No. 5573—Lift Gate

The Anthony Co. announces that a light weight lift gate model is now available for larger trucks handling light, bulky loads. The gate has a loading area of 82 by 30 in. and a lifting capacity of 1,000 lb. One hydraulic cylinder does the lifting and lowering and is powered either by a battery driven pump or a power take-off and pump combination. Loading and unloading can be done from the side even at curb level. The lifting and lowering operations are controlled by one lever from either side of the truck. The gate stops automatically at ground and truck floor levels or can be stopped and held at any intermediate height. For more information on the lift gate, send for the new folder, "Automation For Transportation." There is no obligation. Check No. 5573 on the coupon and mail it to this publication.



ding light, bulky loads. The gate has a loading area of 82 by 30 in. and a lifting capacity of 1,000 lb. One hydraulic cylinder does the lifting and lowering and is powered either by a battery driven pump or a power take-off and pump combination. Loading and unloading can be done from the side even at curb level. The lifting and lowering operations are controlled by one lever from either side of the truck. The gate stops automatically at ground and truck floor levels or can be stopped and held at any intermediate height. For more information on the lift gate, send for the new folder, "Automation For Transportation." There is no obligation. Check No. 5573 on the coupon and mail it to this publication.

### No. 6495—Copper Oxide Booklet

The Calumet Division, Calumet & Hecla, Inc., announces a new booklet on "Calumet Brown Copper Oxide—Fertilizer Grade." The booklet on the concentrated source of copper for fertilizer mixtures and direct soil applications describes brown copper oxide in detail and shows where and how it can be used most economically. It also highlights the research and experimental programs carried on its behalf. The booklet may be obtained by checking No. 6495 on the coupon and mailing it to Croplife.

### No. 5592—Bagging Equipment Catalog

A catalog has been produced by the Bemis Bro. Bag Company's packaging service division to describe its bag filling machines, bag closing convey-

ors and pedestal sewing machines. The catalog is a compilation of 10 bulletins which give specifications, pictures and operational details of three types of sewing machine pedestals, dual head sewing machine pedestal, flat bed conveyor, V-belt conveyor, Vee-Trof conveyor, Vee-Slat conveyor and two models of the E-Z Pak bagger. The catalog is available if you will check No. 5592 on the coupon and mail it to this publication.

### No. 6501—Fork Truck

An 8,000-lb. capacity model with dual drive wheels, the EUT-8024, is the newest addition to Clark Equipment Company's line of battery powered fork-lift trucks. A turning radius of 85 in., aisle for right angle stacking (including 48-in. long load) of 148½ in. and over-all length of 133 in. are dimensional features of the machine. With four speeds forward and four reverse, it will travel loaded at 5½ mph and climb a 10% grade, it is claimed. To secure more complete details check No. 6501 on the coupon and mail it to this publication.

### No. 6497—Valve Closure

An automatic valve closure which the manufacturer, Hudson Pulp & Paper Corp., says virtually eliminates sifting from multiwall bags has been developed, and is scheduled for immediate introduction for use. The Hudson product is known as the Seal-O-Matic Sleeve. It is an insert to be used in the loading of pulverized, granular, crystal and pellet-type products. Company officials say that the device will be effective in the loading of fertilizer, chemicals, lime and other products for which, at present, the annual loss from sifting is high. To secure more complete details check No. 6497 on the coupon and mail it to Croplife.

### No. 6496—Process Control

A new 16-page catalog on pneumatic instruments for process control has been published by United States Gauge, Division of American Machine & Metals, Inc. Catalog No. 505 discusses indicating pilots, transmitters and receiver gauges. A new instrument shown for the first time in the catalog is the 3½-in. scanning diaphragm receiving gauge with rotatable dial which permits the operator to rotate the dial to a common set point. The pilot is claimed to be unique in that it provides both input and output gauges and features a large dial showing both set point and process variable. Complete information is contained on measuring elements for pressure and temperature applications. Ordering information, dimensions and typical dial faces are also included. Check No. 6496 on the coupon and mail it to Croplife to secure the catalog.

#### PILOT SCHOOL DEFERRED

SACRAMENTO—Agricultural Aircraft Assn., Inc. indefinitely deferred the opening of the agricultural pilot school at the University of California, Davis, association spokesmen announced recently. No reason for the action was announced but apparently the association was forced to defer the training because of conditions beyond its control.

For Results . . .

**Croplife**

. . . Want Ads



# Better Selling

Richer Sales Fields for Dealers



Doing Business With

## Oscar & Pat



Pat McGillicuddy, the idea man in the Schoenfeld & McGillicuddy farm supplies store operation, sat at his desk on a cold morning, thumbing through the stack of farm magazines, government bulletins, house organs and trade journals that somehow or other always seemed to accumulate on his desk, much to the disgust of his partner.

Nothing accumulated on pudgy, balding Oscar Schoenfeld's desk, however, except a list of delinquent customers which he was always egging Pat McGillicuddy to try to collect. Oscar was the sort of fellow who liked to do things on schedule and dispose of them quickly as they came up. Oscar had one yardstick for handling any business problem. It was "Will it put more gelt into our pockets?" and if the answer was "no," then that is what it was. Nothing speculative was inborn in Oscar's makeup. Everything worth thinking about had to be a sure thing, or it was nothing.

From time to time this morning Oscar looked contemptuously over at Pat reading magazines. That was the way Pat always wasted time. Why didn't he attend to selling and servicing promptly like he, Oscar, did the bookwork, discounts and things like that? If Pat would do likewise, then the firm would really get someplace.

Pat began to chuckle and laid down his magazine. "Ho, ho, a penny for your thoughts, eh?" he laughed. "Customers here we come."

He reached for the telephone and called Milt Nedderman, owner of the local lumber yard. "Milt," he said, "have you got some glue that is strong enough to hold down a few pennies on a piece of plate glass so that customers can't pick them up and walk off with them?"

Milt Nedderman was proud to be a dealer in the building supply field. "Have I?" he said. "Pat, I've got glue that's so strong that if you put some on your mother-in-law's teeth she'll keep her mouth shut forever."

"Well," laughed Pat, "that sort of product ought to fill our needs. I'll be over for some of that glue later on."

When Pat hung up, he saw Oscar gazing at him with contempt. "Now what silly idea is this?" Oscar asked. "Ach, what has glue got to do with the fertilizer business?"

"Oh, you were listening, eh?" Pat said quietly. "Well, Oscar, I have just thought up a fine promotion for us. Got the idea from an ad in a farm magazine about saving pennies."

"Promotions!" Oscar said sarcastically. "We could forget them until next spring. We've had too many already."

"That is where you are wrong," Pat said vehemently. "The minute a dealer stops thinking of ways to promote more business, he falls behind in the race."

"Maybe he falls behind, but he saves his pants," Oscar barked practically.

Pat ignored the insult. "Oscar, we have been in business now for 15 years."

"It seems like 50."

Pat grinned. "I feel that way, too, sometimes, but we have to eat and so we keep on running the business day after day, putting up with each

other nevertheless. For our 15th anniversary we can run a big sale where we offer to give every person a merchandise certificate for \$1 in trade for every 1942 penny brought in—one to a customer, of course."

Oscar was so disgusted he threw down his pencil, breaking the point, but he didn't notice. Ann Hydrous, the Maltese cat sleeping on top the safe, woke up, saw what was going on, then turned her back to the men and went to sleep again.

"Ach, giving stuff away again!" he snorted. "McGillicuddy, when can we start taking in instead of giving out all the time? We are in business to make money. How can we do that, Himmel, with you giving everything away all the time?"

"Give and you shall receive," Pat said softly. "Haven't ye ever heard of that, Oscar?"

"Ach, I listen to the minister every week, but that doesn't mean I agree with everything he says," Oscar said. "You have to have common sense if you want to get along in business."

"If I know farmers," Pat said sagely, "they will travel 75 miles to get something free, but they won't travel five miles to get a \$10 item for \$9."

"Ach, and if I know farmers," Oscar retorted, "they will flock in here to get those \$1 trade certificates and never buy anything else. Suckers smell and farmers know it."

"I'll bet that with this stunt we will almost double our normal store traffic for one week," Pat said, "and farmers who get a \$1 trade certificate for bringing in a 1942 penny will also place orders for many tons of fertilizer. We'll sure manage to talk fertilizer to them that week."

"Huh," Oscar said skeptically. "They'll listen to you and then go home without ordering. Why don't you spend time collecting past due accounts? Ach, there is a bunch of them."

"I'll get around to those bills one of these days," Pat said slowly. "Well, I think I'll go over to Nedderman's and get that glue."

"What do you want the glue for?"

### OVER THE COUNTER

(Continued from page 9)

farm woman drove up to the farm supply dealer's store and said she wanted four bags of fertilizer, but didn't have room to take them with her, because she was buying a lot of other merchandise at other stores. The dealer smiled and told her that since she had always been calling for her own supplies and had paid cash, she was entitled to both discount and free delivery in a pinch. You should have seen the smile of appreciation on that woman's face and how she thanked the dealer. He was wise enough to know that it is the little courtesy now and then which wins customers.

"Some dealers don't like to have farmers use their telephone for town calls," he said, "but I do. It brings more farmers into the store, and they always have many calls to make. Sure, it runs up my phone bill now and then, but you should see how much I sell to that extra traffic. And those customers think I'm a great guy to be so accommodating. It doesn't hurt me one bit."

Another time when I visited a

Oscar growled. "If you are going to give away all those certificates for pennies, can't we cut down on something—like that glue?"

Pat shook his head. "Oh, no, that glue is important. I am going to glue about 15 pennies to the plate glass cover on the wrapping counter. Then when we hand farmers their change we will lay it right on top of those glued pennies. As farmers pick up their change they'll find some pennies glued to the glass. Then they'll ask questions about the pennies. And then we can tell them about our 15th Anniversary sale coming up."

"Ach, how silly," Oscar blurted passionately. "If I know some of these farmers, they'll take out jackknives and when we aren't looking they'll try to pry the pennies off the glass."

"Let them," Pat grinned. "We won't lose much. And they will then remember our penny idea more than ever. We want publicity."

And with that remark he went out the door.

Oscar was chewing his lips furiously. "Maybe," he said aloud, "I should buy a quart of that glue and pour it into the seat of that Irishier's chair. Then he would have to stay there for awhile. Ach, it would keep him from runnin' around on those silly, sales promotion ideas."

At this remark, Tillie, the ulcerish, plump bookkeeper, began to laugh. Oscar looked at her puzzled. What was she laughing at anyway? Was she getting crazy, too, like Pat?

### Rutgers Conference Arranged for Nov. 29

NEW BRUNSWICK, N.J.—Rutgers University's annual pesticide dealers' conference is scheduled for Nov. 29 at New Brunswick.

Topics to be discussed include forage, field crop and livestock insect control, vegetable diseases and insects, ornamental insects and diseases, herbicides, fruit insects and diseases and small fruit insects and diseases.

cheerful dealer, I found a farmer arguing with him about what the farmer said was the "high price of fertilizer." The dealer just grinned and said good naturedly: "I have to make a fair profit to stay in business, Jim, and so do you on the farm. If I could lower my prices and still make a decent profit, I would, but I can't. I keep selling lots of fertilizer which must mean that many farmers continue to make a profit, too, using it."

This dealer didn't get insulted when the farmer complained about prices. I notice that some dealers do look insulted when they get a question like this. But it does not pay to get angry. In fact, it may drive the customer away. Why not talk it over with him man to man? Admit you are not in business just to break even, but let him feel you want to give him all the value and all the service you can for his fertilizer dollar. Show that kind of interest in his welfare and he will appreciate it, even if you cannot lower your prices. Man to man talk is what he wants.

CROPLIFE, November 26, 1956

## Gloomicides

A Tennessee distiller last year sent a gift keg of whisky to an improvident friend up in the hills. Along about the end of January, the beneficiary dropped in on the giver and hinted that more liquor would be welcome.

"Aren't you overdoing it a little?" asked the distiller. "As I recall, I sent you a whole keg just a few weeks ago."

"That's right, sir," admitted the mountaineer, "but you got to remember a keg of whisky don't last long in a family that can't afford to keep a cow."

"I wonder why a girl can't catch a ball like a man," mused the boy.

"Oh," bubbled the sweet young thing, "a man is so much bigger and easier to catch."

Most of us can endure the great calamities of life with fortitude—but wondering if the price-mark on a gift was erased is what really gets us down.

A Milwaukee restaurant owner tells of noting a couple seated in his place, arguing rather heatedly. He walked by their table frowning, so they lowered their voices, but soon they were at it again.

As he headed for them again, the argument rose to a climax.

"I'm going to divorce you," snarled the woman.

The man shook his head. "I know you don't mean that, darling," he said. "You're just saying that to make me feel good."

A race-horse owner from the West showed up at Churchill Downs with an 8-year-old horse that had never been in a race before and entered him in an important event. Since an 8-year-old non-starter is hardly a betting attraction, he was off at \$136.50 and galloped home first by 10 lengths.

The stewards suspected dirty work and demanded of the owner, "Is this horse unsound?"

"No, sir," asserted the owner. "Soundest horse you ever saw."

"Why haven't you raced him before?" persisted the men.

"To tell the truth," said the Westerner sheepishly, "we couldn't ketch him till he was seven."

A Scotsman had been told by his doctor that he had a floating kidney. Disturbed by the diagnosis, he went to the pastor of his church with a request for the prayers of the congregation.

"I'm afraid," the pastor said dubiously, "that the mention of a floating kidney would cause the congregation to laugh."

"I don't see why," replied the sufferer. "It was only last Sunday that you prayed for loose livers."

Cartoon of little boy kneeling at his bedside: "Mom, do you suppose it will be all right if I put in a commercial about a new bike?"

We always keep our head down when we play golf. Our game affects us that way.



# Better Selling

Richer Sales Fields for Dealers



## FARM SERVICE DATA

Extension Station Reports

fewer European corn borers have been found this fall in Maryland than were found in 1955 according to Wallace C. Harding, Jr., entomologist at the University of Maryland Extension Service.

A recent annual survey conducted by Mr. Harding showed the state average this fall to be 78 borers per 100 stalks of corn. Last fall a similar survey showed 140 borers per 100 stalks. Borer populations were down in all but Carroll and Worcester counties this year.

Mr. Harding said the survey is made each year to determine the number of borers expected to overwinter in corn stalks throughout the state. The results give entomologists and farmers an idea of what to expect the following growing season. The survey also helps to estimate the loss of grain corn for the current season.

Ten fields are selected at random in each county for the survey, and 25 stalks in each field are examined for borers. From this information the entomologists determine the number of borers per 100 stalks. An infestation is considered heavy when a county averages one or more borers per stalk.

In the ten years the survey has been taken, 1947 proved to be the worst year. The state average then was 215 borers per 100 stalks. The best year was 1950 when the state average was 24. For the ten year period the state average has been slightly over 85.

★

"In Massachusetts . . . only those individual farmers who are rapidly increasing their efficiency and cutting costs per unit of output will be as well off this year as last," George W. Westcott, Extension economist, University of Massachusetts, made the above statement in discussing the farm situation recently.

Mr. Westcott added that farm prices average about the same as last year with milk prices higher, poultry and egg prices lower, vegetable prices about the same, and apple prices higher but with only half a crop. However, farm costs have risen more in Massachusetts than they have nationally so that total net farm income here will be lower this year.

For the country as a whole farm prices are slightly higher than a year ago, but costs have gone up about 1%. Hence the parity ratio is 1% lower. In the past month prices have fallen more than usual for this season of the year, so the parity ratio has dropped almost 5% in recent weeks.

★

Results of experiments at the Pennsylvania Agricultural Experiment Station show that phosphoric acid plays the dominant role in the fertilization of snap beans. The results of the work in Union and Potter Counties show that large applications of phosphoric acid can be justified by increased returns.

In Potter County the increased yield from a phosphorus application equivalent to 1,000 lb. an acre of superphosphate was nearly one ton an acre, when compared with no phosphoric acid.

Considering the commercial value of the beans and the cost of

superphosphate, it was shown that the grower's return was more than \$5 for \$1 invested.

"It is not claimed that these results would hold for all soils or conditions, but they do indicate that superphosphate or a fertilizer high in phosphoric acid such as 8-24-8 should be recommended on snap beans on many soils," C. B. Smith, associate professor of plant nutri-

tion at the station, said.

He said that in addition to higher yields the phosphorus treatments resulted in much larger plants with notably larger leaves.

★

Research agronomists of the West Virginia University Agricultural Experiment Station have been investigating the response of Vernal, Naragansett and Williamsburg alfalfas to various proportions of light versus darkness during each 24-hour period. They wish to determine the effects of different periods of light on the yields of these varieties, as well as differences in the chemical composition of the various varieties.

The three alfalfa varieties were planted in two-gallon clay pots for greenhouse testing. Tests were also made with the three varieties planted

in association with orchard grass. Watering and fertilizer applications were kept uniform throughout the trials.

Photoperiods of 16, 14 and 10 hours of light for each day were used in the test. The plants were harvested at a height of 2 in. from the soil surface when the plants receiving the greatest amount of light were approximately 13 in. tall. Harvesting occurred before the plants began to flower.

When conducting chemical analyses of the varieties, the agronomists noticed significant differences in mineral content. Williamsburg contained more calcium than Vernal or Naragansett, while Vernal showed a higher phosphorus content than the other varieties. These findings may influence fertilizer recommendations for the various varieties.



## DOUBLE Protection with Stauffer

Stauffer's business is Research and Manufacturing, not Retailing!

For over three generations Stauffer has devoted nationwide facilities to devising ever better formulations and technical concentrates.

This protects Stauffer formulators, distributors and dealers in two ways:

They are assured of a line that can be sold with complete confidence, and also a line that is sold only through recognized outlets.

Inquire now about the many ways Stauffer can help you boost your net!

### Stauffer offers many Agricultural Chemicals

Sulfur	Granular Insecticides
Insecticides	Defoliants
Miticides	Herbicides
Nematocides	Seed Treatments
Fungicides	Fumigants

### STAUFFER CHEMICAL COMPANY

380 MADISON AVENUE, NEW YORK 17, N.Y.

New York • San Francisco • Houston • Omaha • Los Angeles • Tampa  
No. Portland • Weslaco • Lubbock • Harvey • No. Little Rock







## Croplife delivers the KNOW-NOW!

**ONLY A WEEKLY NEWSPAPER** can keep the industry up to date on the important policy changes being made in the nation's capital—news that affects market potentials *NOW*, that creates new market opportunities *NOW*.

**ONLY A WEEKLY NEWSPAPER** can keep the industry up to date on infestation outbreaks, crop conditions, farming trends — news of immediate value in planning the week-to-week operations of the industry's business *NOW*.

**ONLY A WEEKLY NEWSPAPER** can keep the industry up to date on the fast-moving plans for expansion of plants, new plant construction, changes in personnel—news of importance to the decision-makers of the industry *NOW*.

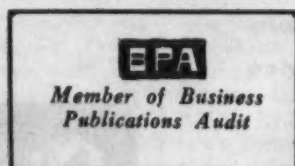
**ONLY A WEEKLY NEWSPAPER** can keep the industry up to date on new developments reported by experiment stations, outlined at association conventions and regional meetings, announced by industry researchers—news of value *NOW*.

and **Croplife** is the **ONLY WEEKLY NEWSPAPER** serving the industry

**THAT'S WHY** Croplife is changing the *READING HABITS* of the agricultural chemical industry by giving its readers—the decision-makers of the industry—the know-how, the know-what, the know-when and, most important, the know-NOW. That's why Croplife is *MUST* reading.

**TO ADVERTISERS** interested in the agricultural chemical industry this means, logically, that Croplife is a *MUST* medium for their advertising message. Keep your story up to date—give your customers the news and information about your products they need in the *week-to-week* operation of their business.

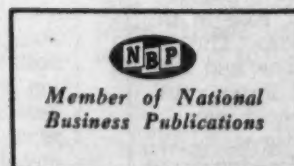
**WRITE-WIRE-PHONE** for the full story of your advertising opportunity in



# Croplife

...for richer <sup>sales</sup> fields

published by The Miller Publishing Co.



**NEW YORK**  
551 Fifth Ave.  
Murray Hill 2-2185

**CHICAGO**  
2272 Board of Trade Bldg.  
Harrison 7-6782

**KANSAS CITY**  
612 Board of Trade Bldg.  
Victor 2-1350

**MINNEAPOLIS**  
2501 Wayzata Blvd.  
Federal 2-0575



## A Dealer's Plan for Speeding Up Records Handling System

With numerous small and large sales going through the average farm dealer's office in one year, the setting up of an efficient bookkeeping system for handling accounts can save time, help collections and facilitate the serving of customers.

Such a system has been worked out by Norman Torgerson, office manager of the thriving Mapleton Feed & Hardware, Mapleton, Wis., a firm which does more than \$300,000 annual volume, selling feeds, fertilizers, farm chemicals, farm equipment and hardware.

Mr. Torgerson did not like the general type of ledger sheets so he drew up a ledger sheet and a statement, too, which serve the feed firm's purposes much better.

The ledger sheet is 6 in. wide and 9 in. deep, is printed on stiff paper and stands up neatly in a tabbed file. This ledger file is placed on the office desk where it can easily be seen by customers and employees. The office area opens into the display store, and customers naturally gravitate to the desk to place orders, to ask for credit and to pay bills.

### Time-Saver

The green ledger card for each customer has a slip number, credits, balances, 30 days due and delinquent. Thus when a customer comes to settle a bill, the employee merely turns from the counter, reaches for the customer's ledger card and can tell instantly how much of his total owing purchases are 30 days due and how much is overdue or delinquent. Thus the customer has a choice of paying his entire bill, or paying the delinquent amount. By breaking down the choices in this manner, the Mapleton firm gets its money in more quickly, Mr. Torgerson states. Furthermore, an employee does not have to figure out in front of the customer which amount is delinquent and which is 30 days due.

The special statement which the firm uses, which is mailed to customers monthly is almost the same as the ledger card, except that the "Delinquent . . . over 60 days . . . past due" column is first. Looking at his total bill "broken down" like this, the customer can see just how much he can and should pay now. At the bottom of the statement, too, is a slogan which says, "Credit is priceless."



**RECORDS** — The management and employees of the Mapleton (Wis.) Feed & Hardware are enthusiastic over the record system now in use at the store. Left, Norman Torgerson points out to the stenographer and Erling Torgerson, standing, how handy the record system is. The stiff-backed cards are out on a desk where they can be reached by all employees during the working day.

It is worth protecting. . . . Let us work together for mutual benefits."

"When we break down a man's account like this," says Mr. Torgerson, "it gives him the option of paying something on his account. The good pay customer usually pays the whole account, but the slow pay fellow often pays just the over 30 days or 'delinquent' part. By breaking down the bill like this we feel that we make it easier for that type of fellow to pay something regularly and still stay on the books as a customer even though he is 'slow'."

A system like this has helped the firm hold down its credit losses considerably. On the ledger card, the delinquent account figure in the last column is always in red ink. This enables Mr. Torgerson and his brothers, E. and T. Torgerson, to list delinquent accounts easily.

During spare time an office girl posts figures from sales slips to the ledger cards, and thus they are up to date all the time.

"Using a tabbed, card file outfit on the desk all day long, we don't have

to be going into the safe for a bulky ledger file all the time, and flipping pages," states Mr. Torgerson. "This is a handy working arrangement of something which we use frequently during the day. The telephone is handy, too, so that we can answer telephone queries about an account without using up too much time."

## North Carolina Records Large Fertilizer Tonnage

RALEIGH, N.C.—North Carolina's total fertilizer tonnage shipped July through September of the current fiscal year exceeded that of the same period last year, according to figures released by the State's department of agriculture.

In July of the 1955-56 season, 12,417 tons were shipped as compared to 14,968 tons this year. August's total shipment last year was 27,992 as compared to 35,992 for that month of the 1956-57 fiscal year. September last year recorded 62,174 tons, whereas this year, some 67,264 tons were registered.

Total tonnage for the fiscal year 1955-56 was 1,649,449 tons. This was the lowest point in the past five years.

## Eastern Horticultural Group Plans Meeting

DOVER, DEL.—The 70th annual meeting of the Peninsula Horticultural Society will be held at Capital Grange Hall, Dover, Delaware, Dec. 11-12, according to James Richardson, society president.

The two-day program will include all the latest research of interest to fruit and vegetable growers on the Delmarva Peninsula.

Vegetable day, Dec. 11, will include a general program in the morning with topics covering chemical weed control, new vegetable varieties, soil treatments with insecticides, and others.

The afternoon session will be divided into two groups to discuss special topics such as tomatoes, asparagus, vine crops, sweet corn and other crops.

Fruit Day will be Dec. 12, with topics on strawberries, fruit culture and insect and disease control. Mr. Richardson states that the staffs on the Universities of Maryland, Delaware and the Virginia Truck Experiment Station will report on current research on vegetable and fruit production. Special speakers from other states will also participate.

## Books on Fertilizers And Their Use

### APPROVED PRACTICES IN PASTURE MANAGEMENT (1956)

M. H. McVickar, Ph.D.

Outlines clearly and concisely how to have productive pastures to furnish high-quality forage for livestock, economically and efficiently. Written for grassland farmers. Covers the important activities associated with establishment, management and efficient use of pastures as grazing lands or as a source of fine winter feed for livestock. It is as specific as possible for all U. S. pasture areas. Twenty chapters, 256 pages, illustrated . . . \$2.40

### MANUAL ON FERTILIZER MANUFACTURE—Second Edition

Vincent Sauchelli

A complete up-to-date revision of this well known book, that reviews in simple, everyday language the processes of manufacture of superphosphates, of ammoniation, and the formulation and preparation of mixed fertilizers. Indispensable to fertilizer plant supervisors and operators, and a valuable aid to research men and teachers. New chapters added: on plant nutrition, mixed fertilizers, ammoniation, granulation, revised and brought up-to-date. 80 tables of practical information . . . \$4.50

### HUNGER SIGNS IN CROPS—Second Edition

A symposium — published jointly by the American Society of Agronomy and the National Fertilizer Association.

A comprehensive study of nutrient-deficiency symptoms in crops compiled by 19 of the leading authorities in the field. It is being widely used by college professors, research and extension specialists, industrial chemists and agronomists, county agents, and teachers of vocational agriculture. Many farmers have found it of particular value in planning their fertilizer programs. Cloth bound, 390 pages, 242 illustrations, including 124 in full color . . . \$4.50

### USING COMMERCIAL FERTILIZER (1952)

Malcolm H. McVickar

Dr. McVickar is chief agronomist of the National Fertilizer Assn. The book deals specifically with commercial fertilizer, how it is produced and how to use it. It is non-technical. It includes chapters on how to measure fertility of soils, secondary and trace-element plant foods. 208 pages, 106 illustrations, cloth bound . . . \$3.00

### THE CARE AND FEEDING OF GARDEN PLANTS

Published jointly by the American Society for Horticultural Science and the National Fertilizer Association.

An entirely new, one-of-a-kind book, it is designed to acquaint readers with nutritional deficiency symptoms or "hunger signs" of common yard and garden plants including lawn grasses, shrubs, flowers, garden vegetables, and cane and tree fruits. It stresses plant "feeding," or "what makes plants grow." Sixteen of the nation's leading horticultural authorities collaborated in its preparation. Cloth bound, 300 pages of text and illustrations including 37 pages in full color . . . \$3.00

### MANURES AND FERTILIZERS

A survey by the Ministry of Agriculture and Fisheries, dealing with soil analysis, inorganic fertilizers, waste organic substances and principles of manuring, in language to give the farmer basic principles of increasing soil fertility by the application of natural organic manures and synthetic inorganic fertilizers. Many important tables on quantitative data . . . \$2.50

### COMMERCIAL FERTILIZERS, Their Sources and Use—Fifth Edition (1955)

Gilbeart H. Collings

Based upon the author's practical experience as an experiment station agronomist and teacher, and incorporating information on recent developments by agronomists, chemists, engineers and fertilizer manufacturers. Authoritative on problems concerning commercial fertilizers and their use in gaining larger yields. 160 illustrations, 522 pages . . . \$8.00

### PLANT REGULATORS IN AGRICULTURE

Dr. Harold B. Tukey

Published September, 1954. A textbook giving background material for county agents, farmers, citrus growers, nurserymen, gardeners; providing fundamentals and general principles; covers encouragement of roots by plant regulators, control of flowering and fruit setting, parthenocarp, abscission, prevention of preharvest fruit 'rop', delaying foliage and blossoming, maturing and ripening, inhibition of sprouting and weed control. Brings together specialized knowledge of 17 authorities in the field, with two chapters written by Dr. Tukey, head of department of horticulture at Michigan State College. 269 pages . . . \$5.50

### PHOSPHATES IN AGRICULTURE

Dr. Vincent Sauchelli

A valuable book for the fertilizer salesman, agricultural teacher, farmer, fertilizer agent and county agent. Deals with rock phosphate versus superphosphate and colloidal phosphate, with the origin of phosphorus, the mining and processing of the phosphate rock, granulation of superphosphates, fixation of phosphates in the soil, losses of phosphorus and replenishments, phosphorus in nutrition, radioactive phosphorus, basic slag, fused and sintered phosphates and TVA research data on phosphates from field tests in 13 states. 176 pages and well illustrated . . . \$2.75

## Order From Croplife

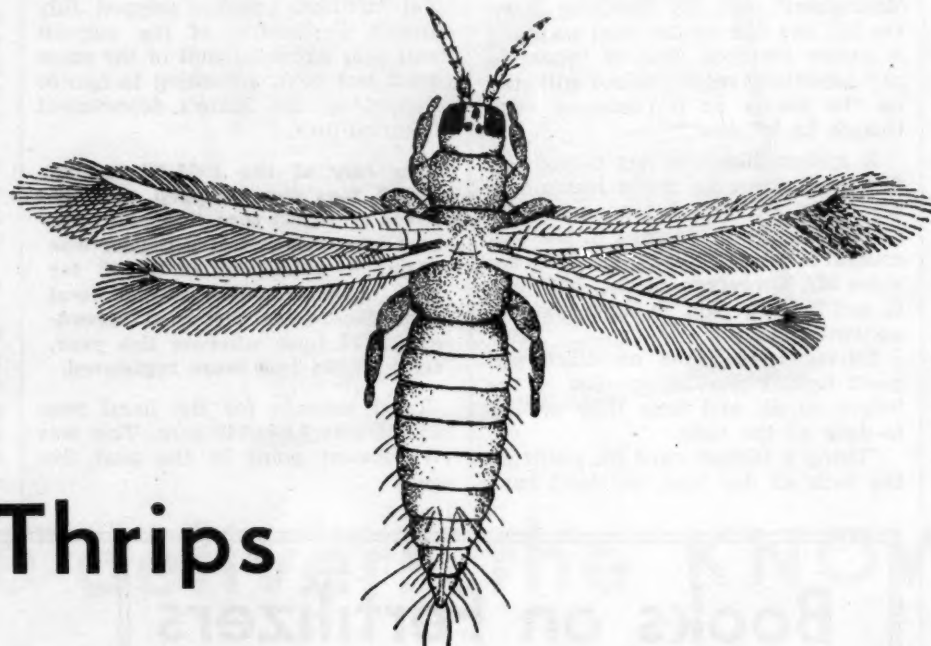
Reader Service Department  
P.O. Box 67  
Minneapolis 1, Minnesota

(enclose remittance)



## Mr. Dealer—Cut out this page for your bulletin board

# BUG OF THE WEEK



## Thrips

### How to Identify

Thrips are small insects, rarely as long as an eighth inch. They feed on the sap of various plants. Many thrips have four wings which are laid back over the abdomen when at rest. The wings are narrow and are fringed with long hairs, which account for the name of the order, Thysanoptera, which means "bristle wings." The foot of the thrip is peculiar, having no claws, but only hooflike depressions surrounding a small bladder.

### Habits of the Thrip

Eggs are laid on the tissues of various plants as a rule, although in some species of thrips, eggs are inserted into slits in the plants. Habits vary somewhat with the species of thrips. Gladiolus thrips, for instance, overwinter and may reproduce on the stored gladiolus corms. During the growing season, the larvae and adults attack the foliage and flowers of the growing plant. In the summer, a generation of the thrips may be completed in 2 weeks. Onion thrips pass the winter in the north in both adult and larval stages, on onion plants left in the fields, and in the crowns of alfalfa and clover. The female lays her small whitish eggs in the more slender tissues of leaves. These eggs hatch in from 4 to 10 days. The larvae begin eating as soon as they are hatched, pass through two stages while feeding upon the plants and complete their growth in about five days. They then enter the soil where they pupate. The pupal

stage lasts about four days under favorable conditions. A generation thus is completed in about 2 weeks. Generations overlap and all stages may be found in fields during the summer.

### Damage Done by Thrips

Thrips damage a wide variety of flowers and crops, including onions, tobacco, citrus and cotton. They pierce the skin of young plants and then suck the sap, leaving malformed seedlings. In cotton, they punch holes in the cells of new cotton leaves and prevent full growth. The tobacco thrip mars leaves used for cigar wrappers and also injures seedling peanuts, causing many to die. The gladiolus thrip ruins flowers and foliage of growing plants. Plant viruses are known to occur in the order Thysanoptera, which includes thrips. The insect gets the virus from a diseased plant, then moves to a healthy plant and infects it during the feeding process.

### Control of Thrips

Materials for control of thrips differ considerably for thrip species. Heptachlor, aldrin and dieldrin, DDT, lime sulfur, wettable sulfur, nicotine sulfate and DDT-sulfur dust are mentioned in different sources as being effective. Due to the many species of thrips and specific recommendations for control of each, it is not possible here to describe details of each. Entomologists emphasize the importance of timing in the control of thrips.

Drawing of Cabbage Aphids furnished Croplife through courtesy of the artist, Marvin H. Frost, Jr.

Previous "Bug of the Week" features have been reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.



## Industry Should Present Views to Congress, Senator Tells Chemists

NEW YORK — Sen. Roman L. Hruska, (R., Neb.), Nov. 20 told members of the Manufacturing Chemists' Assn. that they should not hesitate to express their views to Congress on legislation which might affect their interests. Sen. Hruska indicated that Congress wants the viewpoint of businessmen, as well as other interested groups, when laws are being considered.

He spoke approvingly of the attitude which former Sen. Robert A. Taft of Ohio had toward lobbyists, and stated that he wants to hear the lobbying groups on all sides of pending questions, since that is the only way he can keep himself fully informed on the bills which are being considered.

Sen. Hruska participated in a panel discussion of Congress and business at the semi-annual meeting of the Manufacturing Chemists' Assn. held at the Hotel Statler in New York City. Appearing on the panel with Sen. Hruska were George P. Lamb, a Washington, D.C., attorney, and George A. Fowles, a sales executive of the B. F. Goodrich Chemical Co. Panel moderator was George P. Vincent, manager of government services (Chemical Divisions), Olin Mathieson Chemical Corp.

Mr. Lamb, the co-author of a recently published book on trade association law and practice, told the chemical executives that a trade association is an excellent type of organization for keeping businessmen informed regarding laws which might affect them.

He pointed out that a knowledgeable trade association staff serves as a Washington information bureau and can also furnish the expert guidance needed for effective presentation of business viewpoints regarding legislative problems.

Mr. Fowles, who formerly served as WOC (without compensation) as head of the Chemical and Rubber Division, Business and Defense Services Administration, U.S. Department of Commerce, pointed out that businessmen owe a duty to themselves and to the government to keep informed about the activities of the federal government which might affect them, and to assist the government in such matters as mobilization planning.

Sen. Hruska made it clear that when he spoke approvingly of lobbying he was not talking about improper efforts to influence the lawmakers. He stated that the right of petition is guaranteed by the first amendment to the constitution, and that business groups, as well as other groups such as labor organizations, can properly take the initiative in presenting information which will help Congress to avoid mistakes when new laws are enacted.

To recognize and reward outstanding university and college teachers in the field of undergraduate chemistry, the association announced a national "Chemistry Teachers Awards Program."

Announcement of the project was made by Arthur V. Wilker of Union Carbide and Carbon Corp., a member of the association's Education Advisory Committee and a participant in the 4-man education panel at the meeting.

Six awards of \$1,000 each will be made in 1957 to teachers who, in the opinion of a board of judges, have been personally responsible over a period of years for holding and inspiring the interest of young people in the field of chemistry. In addition, a \$500 award will be given to the institution represented by each winner, such awards to be designated for his department's use. Plans call for pres-

entation of awards at MCA's annual meeting next June.

To bring about increased understanding between industry and schools at the local level, the MCA is preparing a handbook on industry-education relationships. T. C. Fethers-ton, Union Carbide & Carbon Corp., expressed the committee's belief that the manual will promote the effective utilization of MCA's education-aid materials and ideas to a level which no other program of this kind has achieved.

### KENTUCKY INCOME DOWN

LOUISVILLE, KY. — Kentucky farm products brought 5% less in 1955 than they did in the previous year, the Agricultural Marketing Service has announced. The 1955 figure was \$521,633,000 compared to \$547,929,000 in 1954.

## Appointments Made to Seventeen Committees

WASHINGTON, D.C. — Ezra Taft Benson, secretary of agriculture, has announced the appointment of 34 persons as new members of the U.S. Department of Agriculture's research and marketing advisory committees.

These appointments were made to fill vacancies created by rotations, resignations, and deaths of committee members during the past year. Many of the members whose terms expired during 1956 had served on the committees since 1947. Most of these committees, established under the Research and Marketing Act of 1946, have 11 members.

Included in the membership of the advisory groups are representatives of all segments of the nation's agriculture. The committees offer guidance to the Department in planning future research on production, marketing, and utilization of farm products and

CROPLIFE, November 26, 1956—17

on marketing service and educational work.

New appointments were made to committees including Citrus and Subtropical Fruit; Cotton and Cottonseed; Dairy; Deciduous Fruit and Tree Nut; Farm and Home Equipment and Structures; Home Economics; Livestock; Oilseeds and Peanuts; Potatoes; Poultry; Refrigerated and Frozen Products; Rice; Seed; Sugar; Tobacco; Transportation; and Vegetable.

### IMC DIVIDEND

CHICAGO—The board of directors of International Minerals & Chemical Corp. has declared the regular quarterly dividend of \$1 a share on the 4% cumulative preferred stock of the corporation, payable Dec. 30, 1956, and a quarterly dividend of 40¢ per share on the common stock, payable Jan. 2, 1957. Dividend payments on both classes of stock will be made to shareholders of record Dec. 14, 1956.

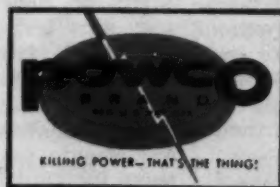


**ON YOUR MARK!**  
for fertilizer  
mixed with  
**Powco Brand Aldrin**

Next season growers everywhere will race for bigger yields than ever. Odds are they'll be betting on a fertilizer mixed with Powco Brand Aldrin. Who wouldn't—considering the terrific success with Powco Brand Aldrin in 1956?

So—it is to the advantage of all insecticide and fertilizer dealers and formulators to be sure there's enough fertilizer mixed with Powco Brand Aldrin to satisfy grower demands.

Root worms and other soil pests that attack such crops as corn, cotton, peanuts, wheat, barley, rye, oats, and tobacco won't wait. Why should you? Get complete details from your nearest distributor of famed Powco Brand Aldrin.



**John Powell & Company**

Division of Olin Mathieson Chemical Corporation  
10 Light St., Baltimore 3, Md.

Burlington, Iowa • New York • Chicago • Fresno • Atlanta  
Philadelphia • Pittsburgh • Ft. Worth • Orlando



## WASHINGTON WIRE

# Election Results Indicate Comfortable Political Climate For Business in Next 2 Years

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON — According to statements coming from the political leaders of the two major parties, there seems to have been glory for each in the outcome of the election. The Republicans obviously took great comfort in the sweeping victory of President Eisenhower. The Democrats saw a stamp of approval of their party in their retention of control of Congress. They claim that President Eisenhower's appeal to the voters was personal and did not mean approval of his party.

The division of power between the White House and Congress appears to provide a comfortable political climate for business and industry for the next two years. The Democrats have slightly increased their control of the House, but the Senate division remains unchanged at 49 to 47.

While it is too early to ascertain what the legislative recommendations to the 85th Congress will be, it seems certain that one of the first moves will be another attack on the farm problem.

## Opinion Divided

There is a broad difference of opinion on the Farm Belt vote. Some declare it a vindication of the Benson farm policies while others note reduced GOP pluralities in the Farm Belt and some small losses in its House membership. Both sides argue their opinions with great plausibility, but the election returns appear to vindicate Ezra Taft Benson, Secretary of Agriculture, and assure his retention in the cabinet. However, there may be some pressure from GOP politicians for modifications of the personnel in his immediate office. One major change might be the replacement of True D. Morse, under secretary of agriculture. The stumbling block may be Mr. Benson himself who appears to have complete confidence in his top subordinate.

If Mr. Morse retires the hope is that James McConnell, former assistant secretary, will succeed him, but it is doubted that Mr. McConnell would return to federal service except under the most potent GOP pressure. Next in line for the post obviously would be Marvin McLain, the present assistant secretary, who has been spearheading policy decisions which held the Farm Belt for the administration despite grumbling against the Benson policies.

Another individual looming on the horizon for advancement is Clarence Miller, presently chief of the tobacco branch of the Commodity Stabilization Service. Mr. Miller comes from Kentucky where the GOP captured the two Senate seats with candidates who are strong backers of the President's policies. These two senators, John Sherman Cooper and Thurston B. Morton may wish to promote the advancement of Mr. Miller. Should they press their claim, it would be hard for the President to reject their recommendation.

## Remodelling Needed

In any event, it is forecast that the Benson machinery at USDA needs remodelling before the administration faces the new Congress which undoubtedly will demand another look at the national farm program.

The GOP losses in the House have been numerically small but the size of pluralities of those elected has been reduced. It may be that the returning GOP congressmen feel that

the reduced pluralities are ominous warnings and without another Eisenhower to lead the way, they fear the congressional election of 1958 and will insist that some radical policy changes be made.

One peculiarity of the election is that GOP candidates were defeated even in instances where the GOP candidate had been on record as opposing the administration farm policies. One instance is the defeat of Rep. Harold Love of South Dakota, and the narrow margin of victory of Sen. Francis Case of the same state. Both of these members of Congress voted against the administration flexible price support policy when the farm bill was amended at the last session.

## Temper of Minority

It will be impossible to learn the temper of the GOP minority in the House until Congress reconvenes. On the Democratic side of the House, there may be some soul-searching, since the Democrats sustained losses in the urban East Coast area.

Despite the minority position of the GOP, the composition of the next Senate seems more favorable to the administration than at the last session. The new Senate will reflect losses of three seats held by Republicans and an offsetting gain of three seats previously held by the Democrats.

As for farm legislation, the loss of the seat held by Sen. Herman Welker of Idaho and his replacement by a Democrat does not represent a loss to the administration farm group since Sen. Welker generally voted against the administration.

In Ohio, where the GOP lost a seat to the Democrats, Frank Lausche, the incoming senator, probably will not represent any change in farm lineup. During the farm debate last session Mr. Lausche said he approved the President's veto of the first farm bill. The defeat of Republican Sen. James H. Duff by Joseph Clark, the former mayor of Philadelphia, brings to the Senate an individual of alleged independent leanings who does not appear to have made any public statements on the national farm policies. However, he is seen as more urban than farm-minded.

## Gain to Administration

The Republican Senate gains cannot be construed as anything but a gain to the administration. The two new Kentucky senators will back the administration on the farm front with the possible exception of tobacco problems. The last Congress continued that crop at full 90% of parity support. Another net gain to the GOP is the election of Jacob Javits of New York to the Senate seat of Herbert Lehman, retiring Democrat. Here again is a probable supporter of the administration farm policies.

Unfortunately, there appear to be few Senate seats on committees for these individuals. The major opening would be in the armed service committee of the Senate where two vacancies occur; another on the finance committee; another on the interior and insular affairs committee and a final vacancy on the committee for labor and public welfare. The seniority rule for committee posts may exclude John Sherman Cooper, senator-elect, from membership on the latter committee. This rule excludes freshman senators from posts where they

are best qualified for service quite often.

The major GOP administrative loss in the Senate is the seat held by Eugene Millikin of Colorado, who will be replaced by John Carroll, an active liberal who is backed by labor and the Farmers Union. Mr. Carroll may be expected to follow the rigid high price support line. However, the administration seems to have the better of the bargain in the Senate as far as farm legislation is concerned.

The close division of the Senate and the age status of several of the Democratic members throw some doubt that the Democrats can retain control of that chamber during the full session of the 85th Congress. A vacancy by death or disability in a state with a Republican governor could break the hold of the Democratic party and cause a tie wherein the vice president would cast the vote giving the GOP actual control.

## 532 Illustrations in Insect Booklet Issued By Hercules Powder Co.

WILMINGTON, DEL. — A new booklet containing a total of 532 insect illustrations, has been issued by Hercules Powder Co. to emphasize the importance of insect control. It is the only book ever published containing illustrations of most of the common insects, properly classified by entomological order, the company states.

To compile the booklet, researchers sifted through every standard textbook on entomology and every bulletin published by the U.S. Department of Agriculture on the subject of insect control, for information and illustrative material. All illustrations were redrawn for uniformity.

According to the publishers, the booklet was designed to appeal to farmers and other individuals to whom knowledge of insects is important. Copies are expected to be available soon through Hercules customers, 4-H Club and F.F.A. organizations, the National Agricultural Chemicals Assn., Federal and State entomologists, county agents and vocational agricultural instructors, radio and TV farm directors and other agricultural leaders.

Hercules has previously published a four-color leaflet, "Cotton Insects," which pictured some 13 cotton insect pests; and a similar leaflet, "Seed, Cereal, and Forage Insect Pests." About 2½ million copies of the cotton leaflet have been distributed, including editions in Spanish and Portuguese. About 800,000 copies of the forage insect folder have been distributed.

## Talk on Trends Scheduled at South Dakota Short Course

BROOKINGS, S.D.—A talk on fertilizer trends and outlooks by W. A. Stolt, Summers Fertilizer Co., Sioux Falls, S.D., will be featured at the seventh annual dealers fertilizer short course, to be held Nov. 30 at South Dakota State College here.

Carl Reed, Bartlett & Co., Vermillion, S.D., will preside at the morning session, and W. W. Worzella, head of the South Dakota State agronomy department, will preside during the afternoon. Ephraim Hixson, chief of the division of agriculture, will open the meeting.

South Dakota State agronomists who will talk are George Buntley, "Soils of South Dakota"; F. E. Schubeck, "Soil Type and Fertilizer Response"; J. R. Runkles, "Role of Moisture in Fertilization"; P. L. Carlson, "Soil Testing"; and B. L. Brage, L. F. Puhr and L. O. Fine, all of whom will talk on fertilizer studies and usage.

## Pest Control Handbook Ready

GENEVA, N.Y.—A handbook on the control of insect pests and diseases of fruit nursery stocks has been issued by the New York State Experiment Station at Geneva. A copy can be had upon request to the station by asking for bulletin No. 776.

The publication has been prepared by Cornell and State University entomologist, F. L. Gambrell, and R. M. Gilmer, plant pathologist. Control measures are based largely on greenhouse and field experiments made over the past six years. Research on some of the pests is being continued.

Virus and virus-like diseases of stone and pome fruits receive considerable attention. Since these troubles are not controllable with sprays, a virus disease control program for nurseries is outlined, based on an "indexing" method for selecting virus-free sources of propagating material.

Both the major insect and disease pests of apple, cherry, peach, pear, plum, and quince nursery stocks are described and many of them illustrated. Recommended sprays for both insects and diseases in nursery plantings are listed. A summary table presents this information in condensed form for the different fruit nursery stocks.

"The control of diseases and insects in the fruit nursery planting is of as great importance to the orchardist who plants the nursery tree as it is to the nurseryman who propagates the tree and grows it to salable size," say the station scientists.

"Although practically all of the insects and diseases that affect fruit nursery stock also occur on orchard trees," the scientists continue, "the importance of an individual insect or disease in the nursery often differs greatly from its importance in the orchard. Nurserymen have a wider choice of pesticides than do the orchardist who must meet strict residue tolerances. Because of this, control practices for orchard use are not generally applicable to the nursery."

## Idaho Fertilizer Tonnages Increase

MOSCOW, IDAHO—Idaho farmers used 94,000 tons of fertilizer in 1955, an increase of 10,000 tons over the previous year, according to Charles Painter, Soils Specialist with the Agricultural Extension Service. Only gypsum showed a decline, 170 tons from the year before.

Farmers bought 16,000 tons of actual nitrogen, 14,000 tons of phosphoric acid, 4,800 tons of gypsum, 100 tons of sulfur, and 315 tons of potash. Total investment in commercial fertilizer was about \$8,000,000.

"The trend is toward fertilizers with a high-nutrient analysis," Mr. Painter reports. "This should be even more evident in 1956. With increased freight rates and other rising costs the fertilizer with the greatest amount of nitrogen or phosphoric acid per ton is the most economical and the logical choice."

Mr. Painter reports that experiments show that in some of the low fertility soils returns of \$2 to \$7 an acre are secured for every dollar invested in fertilizer.

## CROP DUSTER INJURED

TULARE, CAL.—A crop dusting plane struck a power line near Farmersville about 15 miles northeast of here and the pilot, Robert Padgett of Tulare, suffered major injuries in the resulting crash. The plane struck the power line while he was dusting a field. Mr. Padgett is employed by McGallagher Flying Service of Tulare.



# How to Be A Clever Conventioneer



By E. D. Parrish

**EDITOR'S NOTE:** The accompanying article is reprinted from *Sales Meetings* magazine and in it Mr. Parrish lists 12 "musts" to help convention-goers get the most out of any convention. The author, who is director of sales of Chalfonte-Haddon Hall, has observed the shortcomings and advantages of conventions for many years.

Like every other institution in American life, the national convention comes in for its share of satire, criticism, debunking and just plain jibing from time to time. There is nothing wrong with that. Our generation has learned to laugh at itself. We take our jobs seriously, but still have fun doing a good job.

As staff members of one of the nation's largest convention-resort hotels, we at Chalfonte-Haddon Hall have a wonderful opportunity to observe advantages and shortcomings of conventions—several hundred a year. We can pick out faults, laugh at foolishness and discard them both. At the same time, we can keep hold of good things that conventions have to offer and expand on qualities that are worthy of expansion.

Because we are part of the faceless service of a well operated, modern hotel, we rarely have the opportunity to speak up on the subject, but I believe that our collective observations might add something constructive to the great American Convention.

There are many suggestions we could make to committees and paid staff members who run conventions for associations and companies. But that would take a book to print.

First thing that needs improvement about conventions—and the thing that could be most readily and effectively improved—is the convention delegate.

This observation applies almost without exception to every convention. It is true whether the program committee has done its work well, has gone off on a tangent or has just fallen down on the job—and we see all kinds.

In discussing this problem with my fellow staff members, we all agree that it is often shocking to see how many delegates waste opportunities that a convention opens up to them.

## Lack of Preparation

It is this lack of personal preparation and determination to make the most of a convention that, in our opinion, has resulted in some recent debates questioning the value of our expanding convention system. It has been said that convention participation is growing out of proportion to its value—that the convention is an octopus which cannot be avoided and that, once embraced, cannot be relinquished.

We believe that conclusions of this type are neither rational nor true.

The American business system owes much of its success to a continuing search for self-improvement and to a unique willingness to swap trade secrets with competitors.

Competitive cooperation is manifested in the national growth of these association conventions. During the coming year, more than 9 million persons will attend some 20,000 association meetings scheduled for metropolitan or resort hotels. Another 2 million will attend 66,000 company sales meetings.

The multitude of businessmen who spend upward of \$2 billion for con-

ventions annually know, without question, that group meetings are the most economical and productive methods of establishing effective trade and business communications.

Just to see what would come out of it, I have asked my fellow staff members at Chalfonte-Haddon Hall to write down points that they believe are most important—things for a delegate to do—to get the most out of a convention. Here is an even dozen of their pointers:

## 12 Pointers

1. Plan your own participation in the convention from the moment you decide to attend.

2. Avoid disappointment; make your reservations far in advance. State plainly the type of hotel room you would like and the price you are willing to pay. If your plans are unexpectedly changed, you can cancel your reservations without obligation.

3. Write or telephone men from distant places—men you hope to sit down with during off-hours at the convention—and make appointments to get together.

4. Check over personalities appearing on the program. Are there any men here whose experience makes them able to give you a general steer in the right direction? Make sure you attend their sessions and, if necessary for additional information, see them afterward.

5. Jot down specific problems that now confront you in your business. Plan to find men at the convention who can discuss them, help find a solution.

6. When you get to the convention, check the list of delegates to make sure you do not miss an opportunity to visit personally with distant customers or friends.

7. Capitalize on meal-time hours. Arrange to eat with different groups of business friends each meal. American Plan conventions—meals included with price of hotel accommodations—encourage group dining and avoid embarrassment and expense of getting stuck with excessive meal checks.

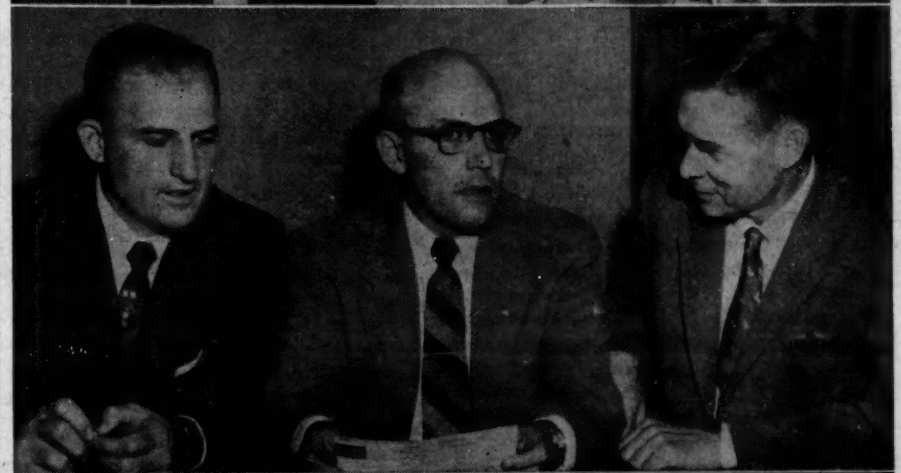
8. Make a point to see and be seen by all of your competitors. Swap a story or an experience with them. Let them realize that you are a co-operative competitor.

9. Plan to spend at least some time with old friends and new in an old-fashioned bull session. Many a tip, more valuable than any in the best planned program, is dug out of just such informal talk.

10. Keep a list of all new acquaintances made at the convention. Write them when you get home and keep in touch with them between sessions.

11. Know your limitations. Overabundance of food and drink and underabundance of sleep make Jack—or anybody else—a dull boy.

12. And, speaking of Jack, the old adage has it that all work and no play has a similar effect. Wherever your convention is held, there are things of interest to see and do. Find out about them as soon as you get to your hotel and plan to interrupt your hard work at the convention with some good old-fashioned hard play. We are in a good position, at Chalfonte-Haddon Hall, to observe delegates at play as well as at work. And we know that many of those who get the most out of convention business also make the most of the recreation opportunities offered.



**AT SOUTHERN SOIL CONFERENCE**—Representatives of the fertilizer industry, the U.S. Department of Agriculture and land grant colleges attended the first annual Southern Soil Fertility Conference, sponsored by the Southern Regional Soil Research Committee and the National Plant Food Institute. The conference, held in Atlanta Nov. 2 was reported on page 1 of the Nov. 5 issue of *Croplife*. Shown in the top photo, left to right, are Frank Boyd, president, Alabama Soil Fertility Society; Dr. J. W. Fitts, head, department of soils, North Carolina State College, and Dr. Willard H. Garman, chief agronomist of the National Plant Food Institute. Second from top are K. D. Jacob, head, Fertilizer & Agricultural Lime Section, Soil and Water Conservation Research Branch, USDA; Dr. M. S. Williams, chief agricultural economist of the institute; and Charles Cox, Commodity Stabilization Service, USDA. Third from top are Dr. Russell Coleman, executive vice president of the institute; Dr. W. E. Colwell, assistant director of research, North Carolina State College; and C. T. Prindville, Swift & Co., Chicago, president of the institute. In the lower photo are Paul T. Truitt, executive vice president of the institute; Dr. J. Fielding Reed, southern manager, American Potash Institute, Atlanta, and G. R. Epperson, Virginia Polytechnic Institute, Blacksburg, Va.

## GLF Names Assistant Purchasing Director

ITHACA, N.Y.—Michael J. Papai has been made assistant director of purchasing for the soil building division of cooperative GLF, according to an announcement made by J. C. Crissey, manager of the division. Mr. Papai succeeds Robert B. Lenhart who recently joined the Potash Company of America.

Mr. Papai is a graduate of Ohio

State University and served as assistant county agent in Orange County, New York for five years before joining GLF in 1950. His entire term of service with GLF has been spent in technical field service work.

His new assignment will be to handle the purchasing of pesticides. E. H. Phillips, director of purchasing, who formerly handled the pesticide purchases, will now take over the plant food chemicals and packages as well as miscellaneous farm chemicals.



## WASHINGTON WEED CONFERENCE

(Continued from page 1)

by \$19. Use of 2,4-D plus nitrogen resulted in yields of 62 bushels per acre and an income return of \$61 per acre. Use of cultivation plus 2,4-D plus nitrogen produced yields of 67 bu. per acre but returns of only \$58 per acre because of the increased production costs.

Dr. Erickson said the control treatment had cut Canada thistle plants from an average of 30 plants to about one plant per square yard.

Dr. Erickson said that weeds are among the agricultural problems handed down from generation to generation. As a case in point, he read a passage from an 1898 University of Idaho publication on weeds. The author mentioned the discovery of three small plots of Canada thistle in the state which he estimated could be controlled at a cost of about \$100. The Idaho agronomist then called attention to current figures showing that the noxious weed is now infesting over 230,000 Idaho acres.

Weed-infested ranges are a threat to Washington crop farmers as well as to stockmen, Grant Harris, WSC range management specialist, said. He told the conference that weeds growing on ranges supply seed to infest farms.

"This is especially true," Mr. Harris said, "in areas where rangeland and farmland are intermixed as in Washington. Also, weeds on range watershed lands find their way through stream channels onto farms."

Most spectacular invasion of Washington rangeland, Mr. Harris said, has been made by goatweed. First good-sized infestations were found in 1930. The weed, poisonous to livestock, now covers somewhere close to half a million acres of land in Stevens, Pend Oreille, Spokane and other counties. Dalmatian toadflax today threatens to repeat this achievement. The brilliant yellow-flowered plant escaped from flower gardens around 1945. It now covers thousands of acres.

Other serious range weeds listed by Mr. Harris as threats to the state's agriculture include Medusa head rye, diffuse knapweed and Canada thistle. These range weeds cut the grazing value of land because they're low in feed value themselves and also crowd out good forage plants, the range management expert said.

Medusa head rye, a long-bearded plant that causes infection in the mouths of sheep, is now moving into cheatgrass areas in the state. Diffuse knapweed is becoming a serious prob-

lem in the Okanogan valley; and Canada thistle growing high along the east side of the Cascades offers a serious threat of infestation of irrigated farms.

David Brannon, WSC extension entomologist, revealed methods of biological warfare. The root-boring beetle which attacks goatweed now has a limited foothold in Washington; an anti-goatweed gall fly has been established in California, and a small weevil, natural enemy of gorse, has been introduced on the Oregon coast.

The Cinnabar moth, a possible control for ragwort, will not be introduced in Washington until proof is made it will not attack plants of economic importance. The whole idea of biological attack, Mr. Brannon explained, is the outgrowth of investigations of the strange balance between insects and their sources of food maintained in many areas for at least the past 50-million years.

Dr. Lowell Rasmussen, assistant director of Washington State's Agricultural Experiment Stations, concluded the first day of the conference by saying, "It's now possible to grow crops and control weeds effectively at the same time using selective weed killers. Certain chemicals today are more effective as weed killers when applied to leaves and stems of plants after they're up and growing." Dr. Rasmussen stated that the practice of foliage applications is not new . . . when weed killers were first used . . . this was the method. In recent years certain herbicides have come back because they work more effectively this way, he said.

Dwight Peabody, assistant agronomist, Mt. Vernon, Washington experiment station, said at the Nov. 16 session that good management as well as good chemicals are needed to fight weeds. Good management includes rotation, fertilizer use, pasture mowing, drainage, irrigation, and judicious grazing among other things, Mr. Peabody said.

Conferees were told by Dr. Thomas J. Muzik, WSC's associate agronomist, "there's no ideal soil sterilizing chemical for weed control yet." Dr. Muzik said there is a place for it on some farms. He feels that "substituted-urea" weed killers are showing great promise, when combined with other soil sterilants, borate and chlorate.

Dr. Muzik contended in some cases it would be cheaper for farmers to sterilize small areas of particularly bad Canada thistle or bindweed . . . to kill out and stop the spread of these menacing weeds . . . even though

this land will be out of production for perhaps several years.

Wesley Yates, an agricultural engineer from Davis, Cal., used graphs and charts to show research studies of spray drift from aircraft. In a recent project with the agricultural experiment station at the University of California, it was found (for a minimum drift from sprays) that it was desirable to fly low; keep nozzles out of the wingtip area and at least three feet from the wingtip; and keep the boom as far from the wing as practical, he said.

L. F. Taylor, E. I. duPont de Nemours and Co. representative from San Francisco, told conference members, "before tracing the process of developing a chemical as a commercial herbicide . . . we should keep in mind that chemicals should be used wisely as a part of a weed control program, along with such proven practices as good sanitation, clean fallowing, clean seed, etc."

In summing up the chemical herbicide development, Mr. Taylor stated that DuPont chemicals are a result of team operation, taking several years of testing, in a very expensive operation. DuPont has invested more than three million dollars in its research and development program in the "substituted-urea" herbicides, Mr. Taylor said.

Auburn Norris, chief of the weed division, State Department of Agriculture at Yakima, demonstrated with slides why the landscape engineer is attempting to economically develop and maintain safe roadsides. He spot-lighted department problems as: mis-use of chemicals; extra cost of mowing, raking and removing weeds; dangers of escaping trash fires, and smoke blowing across roads; and removal of brush which blocks a driver's vision.

In spite of efforts across the country, said Mr. Norris, hardly 10% of highways are now under chemical control. He stated that insurance publications show 1% of all fatal highway accidents are caused by obstructions along roadsides. Mr. Norris repeated, "We need to expand the use of chemicals to secure safe, beautiful and healthful highway areas while reducing maintenance costs and promoting roadside conservation practices."

Nature seems to be on the side of weeds, claimed Al Overland, WSC seed analyst, because weed seeds have a longer life expectancy than crop seeds. He said that "tests of seed viability showed some weed seeds still alive and germinating after being buried from 39 to 60 years." Joint WSC-USDA experiments have

proved some weed seed remains alive in water over a 5-year period. Mr. Overland told the conference that the most difficult weeds to control are those whose seeds have a long dormant or resting period before germinating.

Attention was called to the Ground Spray Short Course scheduled for the Western Washington Experiment Station at Puyallup, Nov. 29-30. The latest news on battling disease, insects and weeds with ground spray and dusting rigs will be discussed. An explanation of state laws relating to ground spraying, bee poisoning, application of herbicides and how the Miller Bill affects pest control and residue hazards will be included in the course.

## Allied Firms Exhibit At Nursery Trade Show

SARASOTA, FLA.—The Florida Nurserymen & Growers Assn. held its annual trade show here recently. Members of the FNGA include nurserymen, landscapers, growers, suppliers and many retail outlets such as garden supply and seed store men.

The trade show, which is an annual event for members of the trade and staged separately from the regular convention, is held primarily for the purpose of displaying merchandise of interest to members of the association. This year there were about 100 commercial exhibits which included plants, fertilizers, chemicals, tools, equipment and other merchandise. A total of \$1,000 in prizes was awarded to the most outstanding exhibits in several categories.

First prize in the allied display entries went to Stauffer Chemical Co., manufacturers of Vapam soil sterilizer. Other displays included the DuPont Co.'s Uramite fertilizer, Chatelier's, a St. Petersburg manufacturer of a liquid plant food, Garden Supply Sales Co., Shell Chemical Corp., Swift & Co. and Wilson & Toomer Fertilizer Co.

The Florida association, with about 850 members, although only in its fifth year is the second largest of its kind in the nation. The 1957 annual convention will be held at Miami Beach.

## CHRISTMAS PARTY

NEW YORK—The annual Christmas party of the Salesmen's Association of the American Chemical Industry will be held Dec. 12 in the Grand Ballroom of the Waldorf-Astoria, according to H. D. Watson, Olin Mathieson Chemical Corp., chairman of the group's entertainment committee.



AT AGRICULTURAL AMMONIA INSTITUTE MEETING—New officers were elected and board members chosen at the Nov. 7-9 meeting of the Agricultural Ammonia Institute in Atlanta, Ga. First picture, above, shows new officers and staff of the AAI. Seated in the front, left to right, are: Paul Duesterhaus, Duesterhaus Farm Supply, Fowler, Ill., first vice president; Fred E. Stewart, Agricultural Ammonia Service, Inc., Santa Paula, Cal., president; Mike H. Carter, Farmers Supply Cooperative, Greenwood, Miss., secretary. Standing are: Frank E. Jordan, AAI executive assistant; William M. Hunt, representing Charles M. Corken, Corken's, Inc., Oklahoma City, second vice president; J. M. Porter, nitrogen department of the agricultural chemicals division, American Cyanamid Co., New York, executive committee member; Mrs. Hazel Harris, AAI administrative secretary; Murray O. Rasberry, Delta Butane Gas & Fertilizer Co., Helena, Ark.; Ralph H. Wooten, Mid-South



Chemical Corp., Memphis, retiring president and member of the executive committee, and Jack F. Criswell, AAI executive vice president, Memphis.

Center photo shows Fred E. Stewart, Agricultural Ammonia Service, Inc., Santa Paula, Cal., new president of the AAI, receiving the congratulations of Ralph H. Wooten, Mid-South Chemical Corp., Memphis, retiring president.

At the right is the panel which discussed the fertilization of pasture and range at the AAI meeting. Tully W. Talbot, left, AAI first vice president, Chemical Enterprises, Audubon, Iowa, introduced the speakers (from left to right): Dr. D. R. Dodd, Hedgesville, W.Va., chairman emeritus, Ohio State Agronomy Extension Department; W. R. Thompson, pasture specialist, Mississippi Agricultural extension service, State College, Miss.; and George Rogler, research agronomist, U.S. Department of Agriculture, Great Plains Experiment Station, Mandan, N.D.





## RAIL RATE INCREASE

(Continued from page 1)

7% over existing tariffs, but another 15% boost on top of the 7%. Beyond these are probably still further rate increases which, if approved by the ICC, would ultimately increase plant food rail shipment costs by approximately 45% over the present tariffs.

It is understood that the potash industry as well as other bulk shippers, such as the grain industry, are not objecting to needed higher general rates to compensate for higher cost factors on the part of the carriers, but the potash industry does set forth a highly specialized complaint against the proposed rate advances. In effect it is saying that it is about time that the old ICC act be given a complete overhaul by the next Congress to bring it into line with modern conditions, and to eliminate the inequities of the present law under which the ICC is bound.

Spokesmen for the potash industry are not opposing the effort of another industry—one regulated by the federal government to earn a stipulated return on its investment as provided in the law—but what the plant food industry and other large commodity shippers ask is that the law be changed to require that no further general rate advances be granted in any broad-axe decisions by the ICC, but that the law be amended to give rate increases specifically to such shipments where the carriers can show losses. The potash industry expresses doubt that the carriers from the New Mexican origin potash can show that such shipments can be chalked up in red ink on the carriers' books if they were set forth under an individual commodity cost breakdown.

The pilloried potash industry comes before the ICC court with a valid case of hardship under any further rail rate increases. Since 1940 there has been no change in its selling prices, yet its labor charges have been boosted by approximately 235%. These appear to have been absorbed.

Another item which cannot but inflame the potash industry has been the treatment the tariff commission granted to potash importers who now gain decided dividend through this potential rate advance.

To the extent that freight rates on potash in the U.S. are increased, it will mean that eastern European potash imports will be able to move competitively into the interior for greater distances to meet the U.S. shipments from New Mexico.

The urgency—some call it capacity—of the carriers to effect a 7% increase over present tariffs prior to further demand for a 15% rate increase—which will probably be followed by further demands for higher tariffs—may be a blessing in disguise since these demands may provoke the incoming Congress to take a long, penetrating look at the composition of freight and passenger rate charges for all commodities and products.

Industries harmed by the potential rate increases are not acting punitively to deny another private industry of proper and adequate rates. Their complaint is that the rate structure is not precise and equitable for all commodities. The ICC law is at best ancient and not geared to modern conditions. In many instances the boosting of freight rates has led to the development and diversion of freight to truck carriers. In the case of basic fertilizer ingredients, wheat and other bulk commodities where truck competition does not provide an offsetting transport factor, those industries are in effect on an "ICC alibi" without any avenue of relief under the present ICC law.

This hoped-for blessing of the urgent demands for higher rates has

provided an unusual avalanche of complaints and demands for extensive public hearings throughout the nation on the issue. This rising tide of opposition is significant at this time when the administration is sorely attempting to bring agricultural costs into line with a price squeeze on the farmers of the nation. Potash and plant food industry officials tell Croplife that it is impossible for them to pass on the costs of higher freight rates to their customers at the farm level.

That condition would defeat the agricultural goal of the administration, it is noted, since the appropriate use of potash and other plant foods by farmers is the one avenue through which they can reduce per unit production costs against the continued price squeeze.

No one in industry doubts the needs of the carriers for higher freight charges, but they doubt the equity of an overall advance of all freight tariffs. They want—and Congress may demand—a new look at the ICC act and a possible renovation of rail tariffs so that the costs of carrying freight may be properly assessed on the basis of actual out-of-pocket charges of the carriers.

This freight rate problem—a hangover from World War II when the carriers were banned from freight rate increases by OPA—is yet to be resolved. It is a significant point in the inherent inflation which faces the nation. Until it is halted or brought into line with other conditions, it must be expected that the carriers will go on indefinitely asking for higher freight rates—to which they seem to be entitled under the existing provisions of the ancient ICC act.

Under heated pressure from many sources, the ICC has widened its hearings on the 7% rate increase request to hear testimony from interested parties across the nation. At the outset it seemed that the carriers would gain the requested boost by default.

Bending under mounting pressures from foes of the proposed 7% rate increase, the ICC modified its arbitrary ruling on hearings and has broadened its rule to permit an additional ten days to the opposition.

After Ezra Taft Benson, secretary of agriculture, insisted that the time limit granted failed to take into consideration the position of the farm community, the ICC amended its ruling to grant a new deadline for written objections to the 15% rate increase request to Dec. 24. It left unchanged, however, the deadline of Nov. 26 for filing of written objections to the 7% rate boost request.

The ICC maintained its previous position that it will open hearings on the 15% rate boost on Jan. 24, 1957 after filing of written briefs on Dec. 24 here. It has ruled that there will be a supplementary hearing in Salt Lake City on Feb. 4 and that oral hearings on the 15% rate boost will be heard here on Feb. 11 before the full commission.

The ICC, however, refused to consolidate the hearings on the seven and fifteen per cent rate increases with similar proposals from the Southern carriers. ICC announced that it would hold separate hearings on the Southern conference proposal in Atlanta on Dec. 12 on the 7% rate climb.

The emergency 7% rate request has been denied expedited action by a division of the ICC from the Eastern and Western conference lines and it will be referred to the full commission for decision.



## WORLD REPORT

By GEORGE E. SWARBRECK  
Croplife Canadian and Overseas Editor

Hungary, in the past three or four years, has been making prodigious efforts to increase its fertilizer production as part of the plan to build up agricultural output. Because the Hungarians are a naturally industrious people, the progress has been satisfactory. However, it is conceivable that the fertilizer factories are involved in the current spate of strikes and slowdowns by means of which the Hungarians are showing their hatred and contempt of the Communist regime.

No doubt the Communist puppet government will have the means to press on with the expansion program which has been on the drawing boards for some time. Next year, for example, it hopes to start up the new Borsod Chemical Works which will have a 10,000 ton capacity. Used there will be a nitric acid process for making a complex fertilizer, Nifosz. This fertilizer is already being produced at the Pet Nitrogen Works.

The Tiszapalkonya chemical organization, one of the biggest in Hungary, also plans to produce 15,000 tons of Nifosz yearly as part of a major expansionist program.

### Pakistan's Needs

The ability of Pakistan to produce fertilizer is way below the country's minimum requirement, according to the Pakistan Industrial Development Corp.

The agricultural industry could use one million tons a year; programmed for production by 1960 under the draft 5-year plan is a total of only 162,000 tons. Needed is a capital investment of \$42 million and if this could be obtained, then the country could produce all its fertilizer requirements economically. Likelihood of the money being made available is small.

PIDC is planning to erect fertilizer plants at Multan, Hyderabad and Sylhet.

Natural gas is freely available and if the necessary equipment can be obtained production costs would be extremely low, PIDC states.

Under discussion is a plan to use natural gas from the Sylhet well of Pakistan Petroleum, Ltd. for fertilizer production. Italian experts, from the Montecatini and Ansaldo companies have been brought in for consultations with PIDC officials. The corporation hopes to produce 150,000 tons of ammonium sulfate a year.

Work started on the erection of a fertilizer plant at Daudkhel some time ago and this, too, is expected to add something to the fertilizer needs of the nation. However, if Pakistan is to develop its agriculture in the next few years, and a growing population means that it must do so, then substantial supplies of fertilizers must be imported. The government would like to avoid this because of the drain on foreign currency.

### Factories in Spain

The Spaniards are working through a mass of bureaucratic regulations in an effort to get their plans for new fertilizer factories off the ground. Two firms, Union Espanola de Explosivos and Sociedad Iberica del Nitrogeno, have applied for government permission to build a factory for the manufacture of nitrogenous fertilizers and superphosphates.

The sponsors say: "It will be the largest factory in Spain, following the most up to date methods, and even the best and most modern on the continent."

A spokesman for the firms paints even a brighter picture: "Although the factory may look now too gigantic, very soon such impression will disappear; the figures of the demand of this indispensable element of agricultural progress will grow enormously with the irrigation works now in

course, not only in Andalusia but in Extremadura. Then the fantastic production will be entirely absorbed and even will have to be increased."

### Portuguese Usage

The use of fertilizers in neighboring Portugal is also growing at a remarkable rate. In 1952-53, nitrates accounted for 178,009 metric tons; in 1955-56 the offtake has been provisionally estimated at 249,211 tons. Potash usage has jumped from 9,716 tons to 14,421 tons in the same period, while phosphates account for 291,055 tons against 365,076 tons.

The government attributes these increases to its policy of subsidizing fertilizers, a policy in force since 1937. Recognized, however, is the need to step up the use of potassic fertilizers. In addition, it is now proposed to encourage the use of lime, because of the high acidity of the majority of Portugal's agricultural land. In the future, subsidies will be applied to lime to attain this end.

### Fison Report

F. G. C. Fison, chairman of the British firm of Fisons, Ltd., has reported to stockholders on the progress of its foreign associated companies.

International Fertilizers, Ltd. of Canada, which operates in Quebec, the Maritime provinces and in Maine has had a difficult and unprofitable year, due to bad weather, uncertainty about crop prices, and competition from American firms.

In South Africa, Mr. Fison relates, fertilizer consumption continues to grow and the Fison factories have been worked at high pressure. To meet the bigger demand, it is planned to erect an additional factory for the production of superphosphate and granular compound fertilizers.

Lower prices for tobacco have created some uncertainty among growers in Rhodesia but Mr. Fison is confident that the country's requirements for fertilizers will continue to increase. Marketing arrangements in this territory are in process of reorganization.

### Monsanto Appoints Three In Overseas Division

ST. LOUIS—The appointment of L. L. Baseler as assistant director of marketing of the Overseas Division of Monsanto Chemical Co. was announced here recently by George S. Hannaway, divisional director of marketing.

At the same time Mr. Hannaway announced the appointment of Kenneth R. Stelloh as a director of sales of the Overseas Division. Mr. Stelloh joins William R. Haas, who has been director of sales since 1955. Arthur M. Moore was simultaneously appointed manager of the New York district office of the Overseas Division, succeeding Mr. Stelloh.



# Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Northeastern states.

Grace Official Foresees . . .

## Great Future Expansion in Agchem Industry

Marlin G. Geiger, executive vice president of W. R. Grace & Co., in charge of its chemical group, gave a group of business men a good look ahead in a recent talk in New York. Speaking on "New Horizons in the Chemical Industry," Mr. Geiger discussed the role of various chemical products in the agricultural picture for the years ahead and told his listeners that both fertilizers and pesticides stand to play an ever-increasing part in this drama.

We think that some of his thoughts are of particular significance and importance to the manufacturing and marketing segments of these trades, and should be re-emphasized here.

Mr. Geiger in the first place, declared that the chemical industry is responsible to a large measure, for the farm surplus problem. "Our radically-improved fertilizers have made it possible to raise more crops on the same, or even less, acreage," he pointed out. "Our insecticides have protected those crops and made it possible for them to reach temporarily glutted markets. Many new and improved agricultural chemicals are now either in the advanced laboratory stage or practically ready for the market. They will make it possible to increase production still further.

"Fortunately we in the chemical industry do not have to keep our eyes so closely glued to the ballot boxes as do the politicians. We can afford the luxury of looking at the long run. And when we do, we see three major facts: our population is growing at the rate of about 2½ million people per year; 95% of our tillable land is already cultivated; and industry is taking an increasingly large proportion of farm products each year.

"These facts convince us that the revolution we have fired must continue.

"The progress we already have made is dramatically illustrated in these statistics: Back in 1920 one farmer raised enough food for himself and seven others. By 1940 he could produce for himself and 10 others; today he produces enough for 18 others. Today, only 11% of the total working force of the nation works on farms, and yet we are enjoying a greater abundance and higher quality of farm products than ever before.

"In 1850 there were 74 producing acres of cropland per person in the United States while today there are only 11. The 350 million acres producing crops now are about the same number as in 1917 and with industrial plants occupying many acres once used for farming, hardly more than 5% remain to be put into production.

"Fertilizers alone have jumped crop yields about 20%. But it is obvious that farmers will have to consume far more than the present 22 million tons of fertilizer a year to produce enough food to feed a growing population.

"The Paley Report puts it strongly: 'Fertilizer . . . is a cornerstone of the welfare of the nation. It is the one single method above all others that will permit our farmers to meet our bigger future needs; without more of it, the job cannot be done.' To meet these vast needs, the industry has invested millions in plants and in research to improve fertilizers and production processes, to reduce the farmers' production costs, and to develop new methods of application and use.

"We at W. R. Grace & Co. have been connected with the fertilizer business for more than a century in this country and abroad. We are first-hand witnesses to the tremendous impact this product has made on agriculture; we know that this im-

portant will continue as the same land, now frequently well-worn, is called upon to produce more and more food."

The speaker also had considerable to say about values of pesticides in the over-all picture, pointing out that their worth parallels that of plant food.

"Today the chemical industry furnishes about 50 basic insecticidal chemicals in thousands of formulations for use against pests and insects which destroy annually the equivalent of 100 million acres of farm products," he said. "Present production of formulated insecticides approaches a billion pounds annually.

"While the United States has made greater progress in the control of insects than any other nation, annual losses are still about \$4 billion.

"Cotton losses suffered from insects have been reduced from \$1 billion a year to \$250 million, as a result of new pesticides, but a major job must still be done," he went on. "Today, entomologists and chemists are vigorously applying scientific research to the end of ridding our crops of more than 7,000 insects and warding off more than 6,000 kinds of plant diseases.

"The chemical industry also will play an important role in satisfying a growing consumption of meat and poultry products in the United States," Mr. Geiger declared. "Chemical feed additives, which are converting cheap feed into high protein supplements and vitamins for livestock and poultry, will enable the farmer to produce more meat at a lower cost to him as well as to the consumer. While the hen and cow are fortified with a better diet, the commercial feed industry will enjoy a spectacular expansion with a steadily increasing demand for our food additives such as urea."

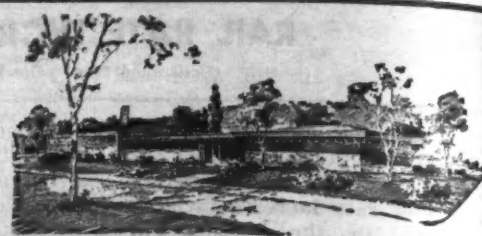
The chemical industry as a whole, said Mr. Geiger, is growing and expanding at a phenomenal rate. "This year," he said, "the chemical industry plans to spend \$1.4 billion in expansion, and for the period 1956-59, the chemical industry is planning a greater expansion than any other industry.

"By 1959 the chemical industry anticipates that 15% of its sales will be in products it wasn't even making last year. Over the next three years research expenditures are expected to increase by 16%," he said. "These facts and figures, I am convinced, bear out the optimism with which we in the chemical industry anticipate the future."

The biggest potential "catch" in the whole picture, it was pointed out, is the problem of getting enough trained manpower to keep the expanded operations moving. Technical ingenuity is the bread and butter of the industry, it was emphasized, and it requires trained scientists and technicians to supply this ingenuity. Today, there aren't enough of these people, and "unless this problem is solved, the industry's expansion may be slowed," Mr. Geiger warned.

He underlined the need for attracting more high school students to the fields of chemistry and physics, which he said are complicated by the diminishing numbers of science teachers available each year. "Salary and other incentives would seem to be the first and most effective way of turning the tide," he said.

Along with the need for this type of personnel in schools and in industry, Mr. Geiger told his businessman audience that another type of person, a "superscientist" is needed. This person would be broadly trained so that he could coordinate the efforts of specialists and be able to follow courses of development wherever they may lead.



Croplife

EPA

NBP

Member of Business Publications Audit

Member of National Business Publications

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

Managing Editor

EDITORIAL STAFF—John Cipperly, Washington Correspondent; George E. Swarbreck, Canadian and Overseas Editor; Emmet J. Hoffman, Merchandising Editor; Walter C. Smith, Research Director.

ADVERTISING STAFF—Wilfred E. Lingren, Advertising Director; Carl R. Vetter, Advertising Production Manager; Bruce A. Kirkpatrick, Assistant Advertising Production Manager.

BUSINESS STAFF—Carroll K. Michener, Chairman of the Board of Directors; Harvey E. Yantis, President; Milton B. Kihlstrum, Executive Vice President and Treasurer; Martin E. Newell, Vice President; Don E. Rogers, Vice President; Wilfred E. Lingren, Secretary; Thomas A. Griffin, Business Manager; Edwin J. Hartwick, Circulation Manager; James G. Patridge, Assistant Treasurer; Richard Ostlund, Office Manager; W. O. Buchkosky, Production Superintendent.

### BRANCH OFFICES

EASTERN STATES—Paul L. Dittmore, Eastern Advertising Sales Manager; James W. Miller and George W. Potts, Advertising Sales Representatives; Suite 3214, 551 Fifth Ave., New York 17, N.Y. (Tel. Murray Hill 2-2185).

CENTRAL STATES—Don E. Rogers, Manager; Henry S. French, Assistant Manager; 2272 Board of Trade Bldg., 141 W. Jackson Blvd., Chicago 4, Ill. (Tel. Harrison 7-6782).

SOUTHWEST—Martin E. Newell, Manager; Thomas E. Letch, Assistant Manager; 612 Board of Trade Bldg., Kansas City 5, Mo. (Tel. Victor 2-1350).

NORTHWEST—Paul A. Anderson, Advertising Sales Representative, P.O. Box 67, Minneapolis 1, Minn. (Tel. Federal 2-0575).

WASHINGTON CORRESPONDENT—John Cipperly, 604 Hibbs Bldg., Washington, D. C. (Tel. Republic 7-8534).

EXECUTIVE AND EDITORIAL OFFICES—2501 Wayzata Blvd., Minneapolis, Minn. Tel. Federal 2-0575. Bell System Teletype Service at Minneapolis (MP 179), Kansas City (KC 295), Chicago (CG 340), New York (NY 1-2452), Washington, D.C. (WA 82).

Published by  
THE MILLER PUBLISHING CO.  
2501 Wayzata Blvd., Minneapolis, Minn.  
(Address Mail to P. O. Box 67, Minneapolis 1, Minn.)  
Associated Publications—THE NORTHWESTERN MILLER, THE AMERICAN BAKER, FEEDSTUFFS MILLING PRODUCTION



# MEETING MEMOS

1957

Jan. 17—Second Annual Western Oregon Fertilizer Dealers Meeting, Withycombe Hall, Oregon State College, Corvallis, Ore.

**EDITOR'S NOTE:** Listings above are appearing in this column for the first time this week.

Nov. 27-28—Indiana Fertilizer Conference, Memorial Union, Purdue University, Lafayette, Ind.

Nov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

Nov. 29—New Jersey Pesticide Dealers Conference, Rutgers University, New Brunswick, N.J.

Nov. 29-Dec. 1—Washington State College Ground Applicators Short Course, Puyallup, Wash.

Nov. 30—Seventh Annual South Dakota Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Dec. 3—Sixth Annual Minnesota Soils and Fertilizer Short Course, Coffey Hall Auditorium, St. Paul Campus, University of Minnesota.

Dec. 5-8—American Phytopathological Society, 48th annual meeting, Netherland-Hilton Hotel, Cincinnati, Ohio.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 11-12—Peninsula Horticultural Society, 70th annual meeting, Capital Grange Hall, Dover, Del.

Dec. 12—American Society of Agricultural Engineers, Power and Machinery Section, in Cooperation with the National Joint Committee on Fertilizer Application, Edgewater Beach Hotel, Chicago.

Dec. 13-14—Ohio Fertilizer and Lime Conference, State Office Building, Columbus, Ohio.

Dec. 13-14—Soil Fertility and Plant Nutrition Short Course, University of Missouri, Columbia, Mo.

Dec. 13-14—Cotton Production Conference, The Titwiler, Birmingham, Ala.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

1957

Jan. 8-9—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 9-10—Eleventh Annual Wisconsin Insect Control Conference, Sponsored by the Entomology Dept., University of Wisconsin, Lorraine Hotel, Madison, Wis.

Jan. 10-11—Mississippi Insect Control Conference, third annual meeting, Mississippi State College, State College, Miss.

Jan. 10-12—Northeastern Weed Control Conference, McAlpin Hotel, New York.

Jan. 15-16—Nebraska Fertilizer Institute, Inc., College of Agriculture, University of Nebraska, Lincoln.

Howard W. Elm, 917 Trust Bldg., Lincoln, Neb., executive secretary.

Jan. 21-25—Pacific Northwest Vegetable Insect Conference and Northwest Cooperative Spray Project, Imperial Hotel, Portland, Ore.

Jan. 22-24—California Weed Conference, Fresno Memorial Auditorium, Fresno, Cal. Conference headquarters, Hotel Californian.

Jan. 23-24—Fourth Annual Pacific Northwest Agricultural Chemicals Industry Conference, Benson Hotel, Portland, Ore., Sponsored by Western Agricultural Chemicals Assn., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

Jan. 23-25—Southern Weed Conference, Bon Aire Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 24-25—Illinois Custom Spray Operators' School, Illini Union, University of Illinois campus, H. B. Petty, extension entomologist.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2—Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal., Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

Feb. 4-6—Cotton States Branch, Entomological Society of America, Birmingham, Ala. W. G. Eden, secretary-treasurer, Alabama Polytechnic Institute, Auburn, Ala.

Feb. 19-20—Alabama Pest Control Conference and First Annual Meeting of the Alabama Association for the Control of Economic Pests, Auburn, Ala., W. G. Eden, Alabama Polytechnic Institute, Auburn, secretary-treasurer.

Mar. 4-5—Western Cotton Production Conference for 1957, Westward Ho Hotel, Phoenix, Ariz.

March 6-8—National Agricultural Chemicals Assn., Spring Meeting, Fairmont Hotel, San Francisco, L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

June 9-12—National Plant Food Institute, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 23-26—American Society of Agricultural Engineers, Golden Anniversary meeting, Michigan State University, East Lansing, Mich.

June 26-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Oct. 2-4—Eleventh annual Beltwide Cotton Mechanization Conference, Shreveport, La.



Charles D. Masone Donald M. Lins

**APPOINTED**—Two men have been appointed sales representatives for the bag division of Fulton Bag & Cotton Mills, it has been announced by Jason M. Elsas, vice president and general manager of the division. Charles D. Masone has been named New York City representative. He was born in Brooklyn and attended St. John's University there. He previously held a sales position in the New York area with one of the bag industry's large manufacturers. The Fulton office in New York is located at 347 Madison Ave. Donald M. Lins, Tampa, Fla., has been named to represent Fulton in southern Florida. He is a native of Miami and graduated from Cornell University. Mr. Lins has held sales posts with citrus growers and exchanges. He will work out of the Atlanta plant at 170 Boulevard, S.E.

## Kansas Hardware Expands Into Farm Chemicals

**EMPORIA, KANSAS**—The Irish-Seybold Hardware Store, which has moved to a larger site in Emporia, is branching out in its new location and is including a well-stocked chemical department. The new department includes farm and household chemicals, insecticides and livestock chemicals. New name of the firm is the Irish-Seybold Hardware and Chemicals.

The 10-year-old Emporia firm will have more room for its operations in the new location, partly as a result of new fixtures designed and built by the firm during the past several months. New fixtures consist of new-type floor islands for the display of merchandise. The partners, Roland C. Irish and H. W. Seybold, have designed the new store room for convenience that will approach self-service in its operation.

Mr. Irish and Mr. Seybold came to Emporia Jan. 1, 1947, from Topeka, Kansas. They had known each other as boys, and the hardware company partnership idea was formed after they both had finished their service in World War II.

## Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$9 per column inch. All Want Ads cash with order.

## HELP WANTED

## SALESMAN

Experienced in selling Agricultural Chemical formulations. Territory in Northwestern States. Write, giving full details, to Monsanto Chemical Co., 800 N. 12th St., St. Louis, Mo. Attn: Mr. K. E. Russell.

All Replies Confidential

## FOR FAST ACTION AND RESULTS

try

# Croplife's

## CLASSIFIED ADVERTISING

## DIAMOND ALKALI DIVIDEND

**CLEVELAND**—The board of directors of Diamond Alkali Co., Cleveland, Nov. 15, declared a stock dividend of 3%, it was announced by Raymond F. Evans, chairman and chief executive officer. This dividend is payable Dec. 24, 1956, to holders of common stock of record Nov. 26, 1956. Mr. Evans announced at the same time that the board also declared a regular quarterly dividend of 45¢ per share, representing an increase of 7½¢ per share over the rate of 37½¢ per share paid heretofore. The regular quarterly dividend is payable Dec. 10, 1956, to holders of common stock of record Nov. 26, 1956.

## INDEX OF ADVERTISERS

Allied Chemical & Dye Corp., Nitrogen Division .....	Meredith Publishing Co. ....
American Potash & Chemical Corp. ....	Midwest Body & Mfg. ....
Anco Manufacturing & Supply Co. ....	Miller Publishing Co., The ....
Ashcraft-Wilkinson Co. ....	Mississippi River Chemical Co. ....
Baughman Manufacturing Co., Inc. ....	Monsanto Chemical Co. ....
Beard, J. B., Co. ....	National Potash Co. ....
Bemis Bro. Bag Co. ....	Naugatuck Chemical Div., U. S. Rubber Co. ....
Blue, John, Co. ....	Nitrogen Div., Allied Chemical & Dye Corporation ....
Bonneville, Ltd. ....	Olin Mathieson Chemical Corp. ....
Bradley & Baker ....	Penick, S. B., & Co. ....
Broyhill Company ....	Pennsylvania Salt Mfg. Co. of Washington, Phillips Chemical Co. ....
Butler Manufacturing Co. ....	Potash Company of America ....
Chase Bag Co. ....	Private Brands, Inc. ....
Commercial Solvents Corp. ....	Shell Chemical Corp. ....
Devere Chemical Co. ....	Sinclair Chemicals, Inc. ....
Deere & Co., Grand River Chem. Div. ....	Smith-Rowland Co., Inc. ....
Douglas Chemical Company ....	Spencer Chemical Co. ....
E. I. du Pont de Nemours & Co., Inc. ....	Stauffer Chemical Co. ....
Farm & Ranch ....	Successful Farming ....
Flint Steel Corporation ....	Tennessee Corp. ....
Hahn, Inc. ....	Union Bag-Camp Paper Corp. ....
Hough, Frank H., Co. ....	U. S. Phosphoric Products Division ....
International Minerals & Chemical Corp. ....	U. S. Potash Co. ....
Johns-Manville Corp. ....	U. S. Rubber Co., Naugatuck Chem. Div. ....
Kent, Percy, Bag Co. ....	U. S. Steel Corp. ....
Kraft Bag Corp. ....	Velsicol Chemical Corp. ....
	Virginia-Carolina Chemical Corp. ....
	Vulcan Containers, Inc. ....

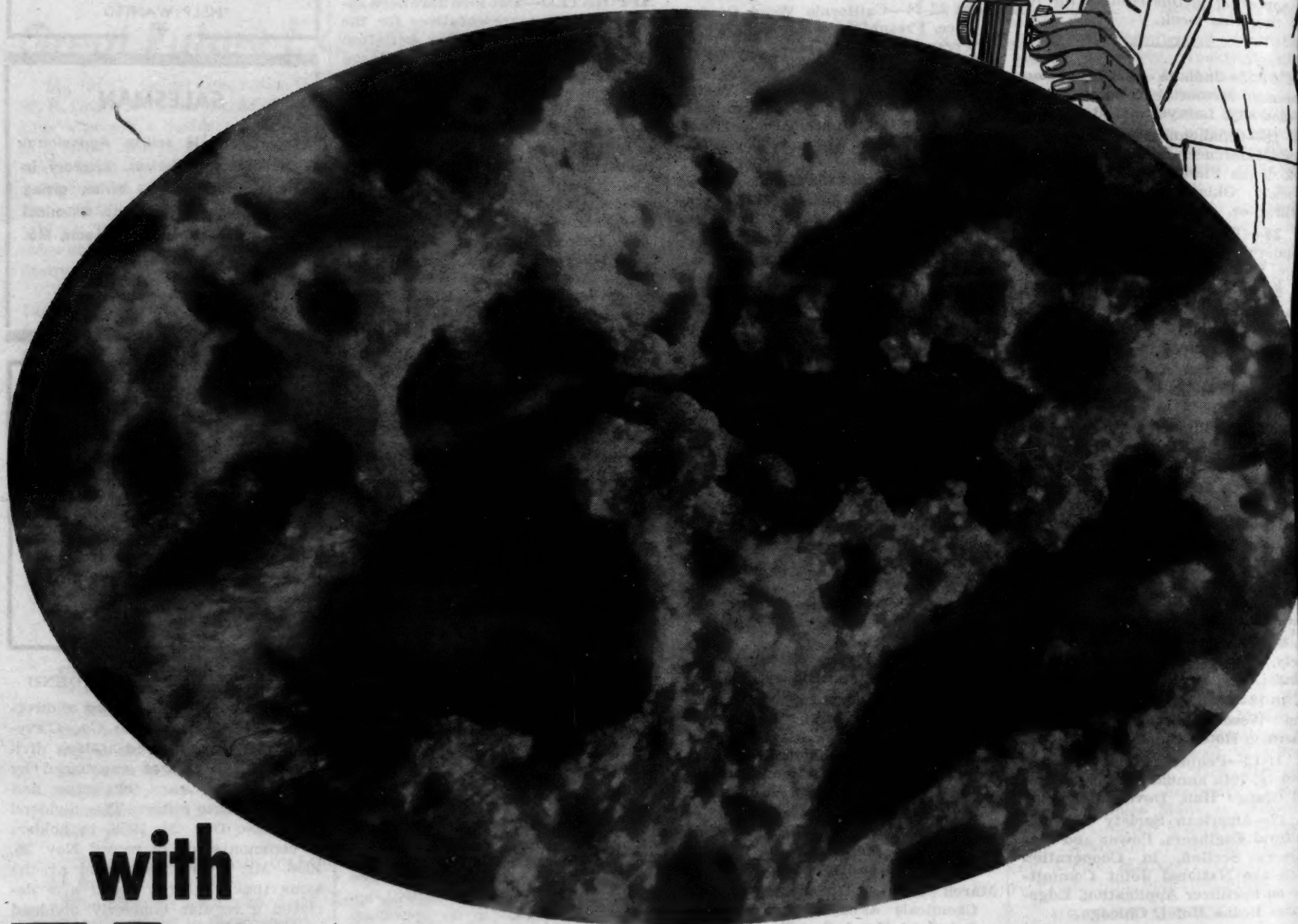
SEE  
Page  
9...

# Better Selling

Richer Sales Fields for Dealers



# See why you get better ammoniation



## with **V-C** triple superphosphate

**Look at a particle** of V-C Triple Superphosphate under a microscope and you quickly see why you get better ammoniation with this quality product. Magnified many times, the "natural" texture of each tiny particle looks like a sponge or a honeycomb. This means more surface area for faster, easier and more efficient ammoniation.

**The "natural" texture** of V-C Triple Superphosphate is the result of a superior V-C method of natural drying. Another advantage of V-C processing is a lower-than-average fluorine content which decreases the possibility of reversion in ammoniation. Quality is the watchword at the big, new, modern V-C Triple Superphosphate plant

at Nichols, Florida—*quality* based on years of experience and production know-how. V-C pioneered in large-scale production of concentrated superphosphate in 1907. Today V-C offers not only the best quality Triple Superphosphate but also the most complete line:

- 45% or 47% Granulated Bulk Triple Superphosphate
- Run of Pile Natural Texture Triple Superphosphate
- 46% Granulated Triple Superphosphate in Your Bags

**You know you can depend** on V-C for SUPER quality and SUPER service. Why be satisfied with less than the best! See V-C today!

**VIRGINIA-CAROLINA CHEMICAL CORPORATION**  
401 EAST MAIN STREET, RICHMOND 8, VIRGINIA • PHONE: 2-0113

